THE LITTLE GARDEN FOR LITTLE MONEY

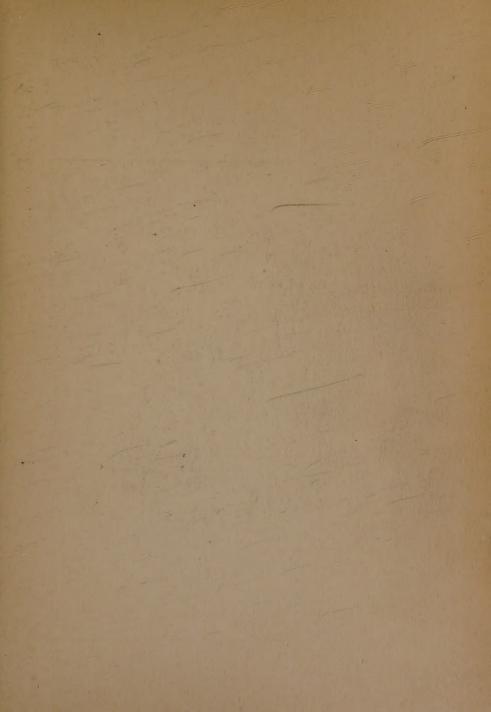


KATE L. BREWSTER

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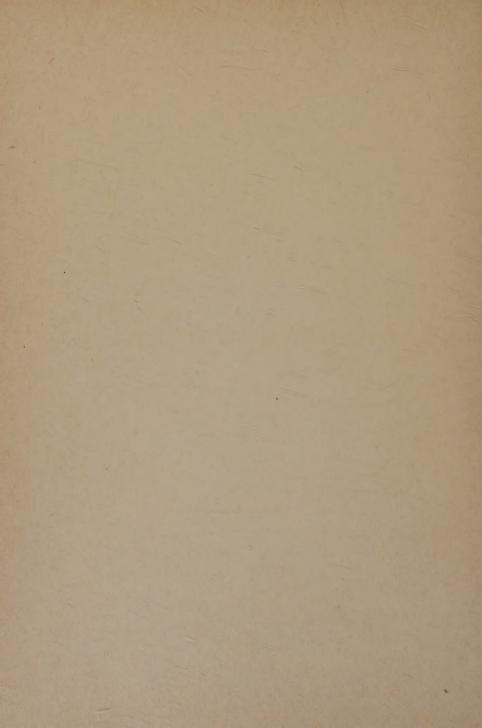


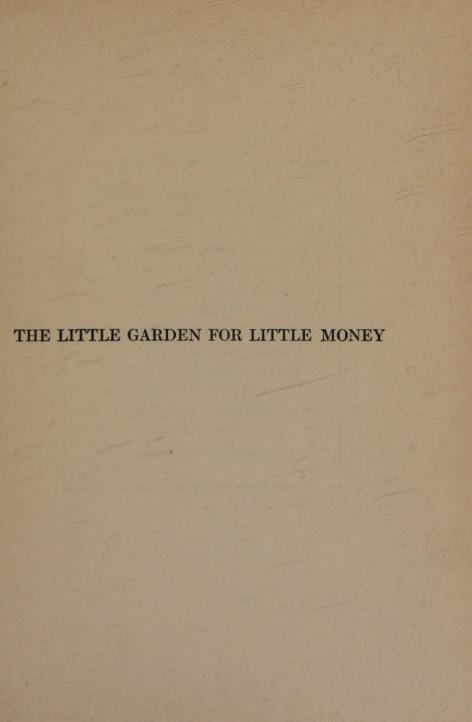
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THE LITTLE GARDEN SERIES Edited by Mrs. Francis King

THE LITTLE GARDEN

By Mrs. Francis King

VARIETY IN THE LITTLE GARDEN

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THE LITTLE GARDEN FOR LITTLE MONEY By Kate L. Brewster

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Ellen Shipman, Landscape Architect

This luxuriant garden is an illuminating example of what can be done with a small piece of ground

THE LITTLE GARDEN SERIES

THE LITTLE GARDEN FOR LITTLE MONEY

BY

KATE L. BREWSTER



With Illustrations

THE ATLANTIC MONTHLY PRESS BOSTON

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EDITOR'S PREFACE

Few amateur gardeners have accomplished as much as has Mrs. Walter Brewster, the writer of this book, in the course of seventeen years. The development of her own property of twenty-five acres into a most interesting whole, yielding in profusion vegetables, flowers, fruits, has been her private work in gardening. Her public efforts have been mainly among Garden Clubs. A founder and one of the first vice-presidents of the Garden Club of America, Mrs. Brewster has been an officer or on the board of directors ever since. She was the second editor of the Bulletin of the Garden Club of America, doing this arduous work with immense skill for six years — from 1915 to 1921 and bringing up that charming publication in size from eight pages to its present sixty-four. Mrs. Brewster is now in her third year as president of the Garden Club of Lake Forest, Illinois, and is a life member of the New York Horticultural Society as well as a member of the Royal Horticultural Society, London.

The Little Garden for Little Money is a positive book. The possibilities set down by Mrs. Brewster are probabilities, and are definitely stated. There is no mincing of words. There can be no mistaking of their meaning. Facts are put in short clear statements, and every fact, one may be sure, is backed by actual knowledge on the part of the writer. In talk Mrs. Brewster uses few of the conventions. I remember, on my first walk with her in her garden, a feeling of surprise when none of these were heard. I might exclaim, "What a good grouping there!" The reply would be likely to be, "Yes, I like that," not the apologetic or deprecatory tone that is the habit of most of us as to what we do ourselves. And this was not complacency but a

straightforward admission of satisfaction in one's own work.

The directness, the simplicity of this book will refresh the reader. It is a sort of "first aid" in garden books, and no pains have been spared to make it the practical guide that it is to the inexpensive garden. For as William James was the psychologist who wrote like a novelist, so Mrs. Brewster is the woman with a goodly estate of her own, who can write as if she owned one measured in feet, not acres; and this because she has gone through every step of the way in the practical work of gardening and can speak from an experience sustained and minute. Those who read these pages will learn quickly how to organize their gardens, how to carry them on with the least expenditure of money.

It is earnestly hoped that *The Little Garden for Little Money* may soon find favor with many beginning gardeners and help them in this ever more engrossing work.

LOUISA YEOMANS KING.

FOREWORD

A LITTLE GARDEN book is hard to write, because no gardener worthy of the name is unenthusiastic and enthusiasm always finds too much to say.

"The Fool-proof Garden" is what this little book wanted to call itself. Its aim is to avoid theories and make no untested statements. Much is left out with intention, and those who have gardened for years and elaborately will be troubled by its simplicity and find it incomplete.

Old gardeners forget how little they knew when they began their gardening career and are impatient with elementary detail. This is a patient and forbearing book that begins at the beginning and does n't tell all that it knows. It is written for the gardener born who has only just found time to make his garden, and if he — or she — finds in it the things he has been too proud to learn, it is serving its purpose.

Throughout this book, Standardized Plant Names, the compilation of the American Joint Committee on Horticultural Nomenclature, has been used as an authority. It does violence to all the author's sentimental ideas and attachments, but authors cannot always have their way. To change Bleeding Heart, Solomon's Seal, and Bridal Wreath from two lovely words into one ugly one is a terrible thing, and to snatch the privilege of the capital letter from so many distinguished plant-families is ignominious to a degree. Perhaps we shall all be joneses, browns, and smiths some day. But standards must be upheld, though in this case the standard-bearer is a rebel. If Sweet William could have kept his capital W, the other changes might have been forgiven.





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GETTING READY TO GARDEN

NICE people like gardens, or liking gardens makes people nice. I am sure that this is true but remain in doubt as to which is cause, which effect. At any rate, amateur gardeners are a pleasant set of people, a little jealous perhaps of the too pronounced success of a fellow gardener, or overproud of the extraearly pea, or inclined to hypercriticism of the æsthetic aims of the next-door neighbor, but always to be depended upon to show a mellow side even to an enemy if he seeks advice on gardening subjects and heeds the advice when given. Which only goes to show that gardeners are human, though real success in gardening is superhuman.

This one general statement leads to another, which is that to garden well requires either time or money; to garden supremely well, both. But the garden amateur — which means gardenlover — to whom this book is addressed will have little either of time or of money to spare. Its high aim is to aid and comfort the beginning, if enthusiastic, gardener with a dollar or two and an hour or two a day to spend on gardening. And because the suburb is the natural habitat of the Little Garden, it will be assumed that the garden is a small, enclosed space where quality rather than quantity is required and privacy must be earned by judicious planting and intelligent effort.

I hope that even before you began to garden you were intelligent and built or bought or rented a house set rather close to the street; a garage, if you have one, very close to the street,

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and that your living-rooms look out on a sizable space at the back, which will become your garden and your pride. It is a wasted opportunity to place a garage at the back of the lot and make necessary a long ugly drive, or to plant a house firmly in the middle of a precious hundred-and-fifty feet, reducing the value of the left-over space at front and back by at least half. It is the first and most serious extravagance of the gardener who has little to spend, and neither time nor money will do all that it should if the organization of the homestead itself is not good. Within our houses we economize space and insist upon convenience of arrangement. We prefer the kitchen screened from the living-room but conveniently close to the dining-room. The same rules should apply to our gardens, which in summer are outdoor living- and dining-rooms and in winter a zone of quiet. Convenience and beauty usually go hand in hand, but in America we are hampered by preconceived notions as to kitchens at the back and parlors at the front and stylish front-yards and messy back-ones. I do not advocate putting the mess in front; I do suggest a well-ordered exterior to match a wellordered interior, with proper concealment for necessarily ugly things and retired nooks for the less ornamental side of living. I suggest that our houses face the street politely and formally in the same way that we face a well-mannered stranger, but for their garden side I ask a pleasant intimacy like the quiet ease and untroubled pleasure with which we welcome a friend.

You will be fortunate if your house is surrounded by a few good-sized trees and more fortunate if you inherit good drainage and soil. But trees, under a mother's care, will grow fast and soil can be made if proper drainage is provided, so perhaps on the whole a vacant lot is best. It gives the fancy play and furnishes food for thought on winter evenings and lots of healthful exercise on summer ones.

It is my experience that the novice considers a seed catalogue his first and indispensable tool. Seeds are the last things you need in garden-making. You must make a garden, not from the ground up, but up from two or three feet beneath the ground, and seed so deeply buried would have little chance. But if plants' tops are to grow up their roots must grow down, and if this downward growth is made easy you have nothing to fear for their showier upward spread.

Before considering plant-material, which the catalogues so temptingly set forth, make a plan of the sort of garden you think you want. It may be that you will make many plans before you make up your mind, but probably before the time actually comes to begin you will know whether you want a hedge or a fence as a boundary, informal or formal planting, a border-encircled lawn or a lawn-encircled garden. You will know where you need screening shrubs and where shading trees and where your paths, drying-yard, and other conveniences are to be.

Make a tentative plan of all this. Even though you may be no draftsman, you can draw straight lines to scale and curved ones so that you will know what they mean. This will be easy if you buy a sheet of paper ruled in eighth-inch squares. Sketch in the buildings and permanent features and then map out your garden with dots for shrubs, little circles for trees, and outlined shapes for your flower beds or borders. If you are not sure just how wide eight feet is, step outdoors and pace it off. A foot is not nearly so wide outdoors as it is in, and if you measure your flower beds in the middle of a room they will seem very inadequate when surrounded by space.

If you have good natural drainage and a porous soil so much the better, but if not, a little money spent on drain pipe will be well spent. This problem of drainage varies so in different districts that it is useless even to suggest details, but a wet, sour, and cold soil will defeat all your efforts, while a well-drained one will make a single healthy plant fill the space of three pindling ones and that in half the time. It will save winterkilling and make trees branch and grow even as their roots are branching and growing in a subsoil which opens little passages for their advance. It will give you early spring bloom, and in dry summers your garden will not bake, while in wet ones it will not drown.

In these days of expensive and unskillful labor, getting ready for a garden costs a good deal. But it costs more to plant carelessly in ill-prepared soil and find when the snow goes off in the first spring a little graveyard of dead hopes and deader plants instead of green shoots and promising buds.

Therefore, after you have considered and dealt with the drainage problem, begin yourself or hire a good and earnest "digger" - which is my word for the wandering individual who appears in the spring and in the fall in gardening communities to do a casual day's or week's work — to dig out the soil in the spots you have chosen for shrub and flower beds. The wage of these unclassified laborers varies in different districts, depending largely upon how little your neighbor likes to work and how much he wants to hire someone to do the work for him; but in suburban communities it ranges from four to six dollars a day, and it is shattering to one's faith in humanity to discover how little a day brings forth. You will find that, until you begin to crave an occasional expensive novelty, nothing that you buy to put into your garden will cost so much as the labor you hire to put it in; so if you can find time and strength for this preparatory work, do it yourself. It is hard but rewarding and is true economy which counts more than buying cheap seeds and plants later on.

You will find, as you begin to dig, a coating of good black dirt and then beneath it the clay or sand or whatever you may hap-



An old apple tree may be made the central feature of the garden

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pen to possess as a subsoil. Put the black dirt aside in a neat pile and treasure it while you excavate into the earth beneath a good eighteen inches. Break this well up and mix with it sand, some coal ashes, some strawy manure, broken bricks, and anything else you may happen to have that would be better buried. Of course if you have used drain-tile it runs just beneath this excavated bed, at a proper depth and angle to carry off the seeping water.

When this is thoroughly done, begin upon your pile of black dirt and make it as much blacker as you can afford. It will need some well-rotted manure, which is a luxury, some lime, and some sand. Or if you cannot get the manure, bone meal will do as well. In fact it is better where such things as peonies and iris are to be planted. Incorporate these thoroughly into the soil and spread it thickly over the prepared subsoil.

Keep all the black dirt for the flower beds. The shrubs will flourish in the well-dug and well-mixed subsoil, to which can be added some of the subsoil taken out of the places where the flower beds are to be, leaving more room for surface soil.

There are several little tricks of the trade that lessen expense and add nourishment of the very best sort to the soil. Perhaps you have built over a house and there is a pile of old plaster torn from a wall or ceiling. Break it up and dig it in instead of lime and sand which must be bought and hauled. It is better and costs nothing. Probably there will be old boxes, fence posts, and dead branches to burn. Pile them in one spot, light a bonfire, rake up the ashes, and dig them into the spot where are to grow the choicest plants. Or dig a neat little pit and put into it everything that goes into the pail under the kitchen sink. Put an old screen over the top, to keep the flies out, and cover the refuse with a shovelful of dirt every day or two. In time you will have the best compost in the world, such as you cannot buy or

make in any other way. Grass-cuttings can be thrown into this pit, and dead flowers from the house, and such vegetable-tops as beets and carrots. If properly cared for it will not smell nor breed flies, and it will grow enviable flowers.

A chapter like this gives little promise of a garden's coming beauty, but all these things are necessary if you would achieve success and if some day you would have time to sit down and glory in your achievement. Perhaps you may be thinking: "What I want is a flower garden, not a dump-heap, and I have n't time or strength or money to waste on all those things that do not show."

If you take this view, in the end you will be sorry. I cannot insist too strongly that the success of the good garden for little money depends upon proper organization and proper preparation.



THE GARDEN WALL

THE first question to be settled, after the general plan of the garden is decided upon, is how to form the enclosing walls. Without these your garden is not really yours, nor does it take on form and proportion. Borders are not borders without something to back them up, and mere flower-beds cut out of turf are insignificant without enclosure or background.

If you live on a busy street and the house is not far from it, the ideal barrier is a high fence or wall, but this is always expensive, indeed far out of reach — at the present prices of labor and materials — of the modest income. A trellis of stained lathing is effective and easily made in the cellar on winter evenings, but it is not particularly substantial and it has a more suitable look as a screen for the drying-yard or the unsightly back-yard of the neighbor on the next street. High pickets painted green or white can be effectively used and are not exorbitant, or there is a charming and very durable woven-wood fencing which comes in sections and which any amateur who is in the least handy can erect himself. Even, I believe, herself could do it. Such a fence has the advantage of giving an all-the-year-round screen immediately, while a growing hedge must have time to grow.

The next-best screen, and a very beautiful one, is an evergreen hedge, and just what evergreen to choose depends somewhat upon the price, somewhat upon the locality. Hemlock is always lovely and fairly hardy but it is expensive and does not grow very fast. If you are willing to buy tiny trees and wait for them to grow up it will cost very little, but enough trees from three to four feet tall to go across the front of a seventy-five-foot lot would cost in the neighborhood of \$60.00. Hemlock (*Tsuga* canadensis) of this size should be set about three feet apart. It is graceful and beautiful in color if the budget can be stretched to cover it.

American arborvitæ (*Thuja occidentalis*) is also a good evergreen hedge plant, hardier perhaps than the hemlock but not so attractive in either habit or color. A seventy-five-foot hedge of this would cost about twenty dollars less than the hemlock and grow upward faster, though it does not spread so much at the bottom. It does not like to grow closely under trees though it can be nursed to do so. These plants should be set about two feet apart in the row. A beautiful arborvitæ which is harder to get and more expensive is *Thuja occidentalis sibirica*: it is a finer green and has a more massive effect.

These two, hemlock and arborvitæ, are the only evergreens that can be counted upon for successful tall hedges in temperate America — and here it might be well to say that so small a book as this does not attempt to treat either of regions like California and Florida where certain things will not grow at all but most things grow like mad, or of very rigorous or very warm climates. This is an average book for average conditions, offering to the average gardener hope of a more than average-pretty garden.

But since economy is the first consideration, the decision will probably fall upon a clipped deciduous hedge, and there are quantities of shrubs that can be depended upon to form dense walls four or five feet tall.

Privet is used most ordinarily, the Japanese variety (Ligustrum ibota) in the sandier soils while the Chinese variety (Ligustrum amurense) is hardier in heavier clay soils. The planting of a privet hedge is a heart-rending business, because you must buy nice little plants two or three feet tall, set them about ten inches apart in the row, and then shear them all off about a foot from the ground. This is the only way to ensure dense growth. The

plants should be set rather deep too, so that sprouts from the lower branches will seem to spring from the roots. Privet puts out leaves early in the spring and does not lose them until late in the fall, which is advantageous, but it is not a particularly pleasing green and sometimes — at the least expected and least convenient times — winterkills. A seventy-five-foot hedge would not cost more than twenty dollars. It should be cut back very hard for the first two years to induce growth at the bottom, and must, throughout its life, be clipped at least twice a year: once in the spring and again about the Fourth of July. In fact, that particular holiday is an excellent one to spend hedge-clipping. Another clipping in September will be advisable if you are not too busy dividing perennials and planting bulbs. This same process is required by all deciduous clipped hedges if they are to be dense at the bottom.

Hornbeam (Carpinus betulus) makes a fine but more mannered hedge. It can be bought five or six feet high and set about two feet apart. It is very slow-growing but when it fills out it is very "stylish," if the adjective can be used in such a connection. Trees of that size cost about a dollar each and are very spindly. It is being used more and more in formal planting and for that reason is mentioned. Unless something rather special is your desire, it would be better to use a more ordinary shrub.

Nothing is more distinguished than a lilac hedge. Its swelling buds are almost the first sign of spring and the fine green leaves defy many frosty nights. The common lilac (Syringa vulgaris) is inexpensive and hardy and will grow to almost any height you wish. Of course clipping will prevent many blooms but you can have lilacs for that purpose somewhere else. Plants three to four feet tall should cost from fifty cents to a dollar apiece and must be set about thirty inches apart in the row.

Spiræa vanhouttei (Bridalwreath) is an excellent and very

cheap hedge-plant. Like privet, it must be set close and cut close — about eighteen inches apart. The clipping will destroy most of the blossoms, but the brown wood and small green leaves give a charming effect and the whole hedge, seventy-five feet, can be planted for ten or fifteen dollars.

Last, but far from least, comes hawthorn (*Cratagus*). It grows very slowly and must be cut back from the top for several years to keep it thick at the bottom, but when it is successfully established it is exactly right. The gray-green of the thorny wood in winter is lovely, the flowers in the spring are enchanting, the glossy green leaves of summer refreshing, and the red and russet of autumn foliage most beautiful. It is inexpensive and its only real disadvantage is its slow growth. If you are impatient for a screen it is not for you; but if you are willing to wait, the day will come to rejoice in your choice and to think, "What a good gardener am I!"

All these hedges are suggested for the planting across the front of the place, and make a rather formal effect, consistent with the idea that the more intimate part of the garden is behind the house. How high they should be is a question that is settled by various considerations. Do you want to see what is passing by? Do you want the passers-by to see — and admire — the house? Are you far from the road or near it, and is the road a maintraveled one or a byway? How far back have you been wise enough to build or fortunate enough to find the house?

The general rule would be a high barrier when the house is near the street — as high as possible if the street is much used. The higher the barrier the more formal it should be. When the house is set far back, use a wide and lower hedge. Always plant a formal hedge closely and economize in variety rather than in number of plants. Decide, before you do anything, your personal preferences as to whether you will look out upon the world and



A beautifully simple English garden: part of a large place, but perfectly suited to the small suburban lot

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allow the world to look in upon you, or whether when you enter your gate you will withdraw into your home and invite the world in when it is pleasant to do so. It is rather better gardening to shut the small garden away by itself, but since it is your pleasure-place, it should be what gives you the most pleasure.

After the front fence is decided upon comes the matter of the sides and back, and these depend a good deal upon the neighbors. It may be that you will want a pleasant expanse of lawn running behind your own and several houses in the block. In many places this arrangement has been most beautifully carried out, but a better plan is to partly enclose each garden, leaving openings or gates between. As, however, this is a planting-scheme that is practicable only under certain conditions, it will be assumed in planning and planting our little garden that we wish to be shut in, away from marauding neighbors.

There is nothing better for a high and inexpensive back-screen than bush honeysuckle, either the variety Lonicera tatarica or Lonicera morrowi. Both are very fast growers, have pretty blossoms in the spring and good foliage all summer. They can be set five or six feet apart and in no time you will be cutting them back because they take up so much room. Many of the things that have been suggested for clipped hedges can be used for high, informal planting too, such as lilac (Syringa vulgaris) and bridal-wreath. The lilac will grow very tall and the other six or seven feet. Persian lilac also would be a splendid variety to use.

If the lot is deep enough, a thicket of wild crab (Malus) is a charming back-planting. Perhaps if you live in a country where they are indigenous you can buy some from a farmer's wood-lot, dig them, and plant them yourself. They will cost very little and you will find among them a variety of forms and blooms. They are certainly our most beautiful flowering small tree and no matter how tiny the place, there should be one on it.

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The back line is an excellent place for high home-made trellis, and a woven-wire fence makes a good support for vines. Usually this particular bit of planting must be a screen for something unsightly behind, and if possible a beautiful and entirely dependable screen. Consider this in anything you may decide to do. Use the same high screen for any necessary but unattractive convenience of your own, such as a garage at the back of the lot, a compost-pit, a chicken-coop. You must be careful on a small place not to use too many sorts of things for about the same purpose. This does not mean that you may not have as many varieties of shrubs, trees, and flowers as you can get in without crowding, but that a trellis here, a honeysuckle hedge there, a bit of fence somewhere else, is confusing without being pleasing. It is perfectly feasible and rather agreeable to use a mixed planting all around the lot, taking care to put the highergrowing shrubs at the back, but there must be a certain order and design in the mixing.

There are several ways of treating the side lines of a rather narrow lot. They may have a low fence, either wire or rail, with plants growing over or in front of it; the front hedge may be continued back to the house line, where something more like a shrub border than a hedge begins; or if there is a wall or fence on the street, a lowish clipped hedge may run all down the two sides. The mixed-shrub border would be least expensive and with limited space give more variety of interest.

Into this mixed planting I would not put shrubs with variegated or yellow leaves: hardy hydrangeas, Berberis thunbergii (Japanese barberry), or Spiræa Anthony Waterer. These are abominable creatures, and that space so limited as that of the small garden should be taken up with them is a tribute to the itinerant nurseryman and the desire of stand-pat man to have just what everybody else has. It can't be that people really like sick-looking foliage, spiky pincushion-like masses, and woolly off-color flowers, but of these things they have been taught the names, so they buy them.

Into the mixed planting must go Japanese quince (Cydonia japonica), lovely at all seasons and loveliest of all in flower, and not nearly so susceptible to scale as some people will tell you; Forsythia, whose flowers are the very first of the spring; lilacs of the good, named varieties if possible; a Philadelphus or two; some of the commoner bush-roses such as Madame Plantier (white) and Harrison's Yellow; a few bridalwreath, and — if you do not live in a wheat country — some common barberry. This last harbors the wheat rust and is not permitted in grain districts, but it is a beautiful and graceful shrub that makes a fine background.

All these, which are easily obtained and very inexpensive, should be arranged in groups, balancing each other if possible, and with consideration for their habit of growth and foliage-value. It is not easy to do this with the brown stiff stock that arrives in the autumn or early spring, but a visit or two to a good nursery and some intelligent observation of successful plantings in parks or other gardens will help. The lilacs, Philadelphus, and roses can be used as outstanding features, the others as a setting for their more showy charms.

Most nurseries give dozen prices on half-dozen lots and it is surprising how far a judicious expenditure of twenty-five dollars will go. But the selection must be judicious or another twenty-five dollars will have to be spent the following year. It is not safe, when little money is available, to make experiments. Better make mental notes of the shrubs and trees that seem happy and vigorous in your neighborhood, better ask advice from older inhabitants, better go to local nurseries and study their stock. Most of your catalogues will come from a distance and contain

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pictures of surprisingly beautiful things growing rampantly. I am now the possessor of a pindling *Euonymus radicans*, purchased along with many others fifteen years ago because there was such a beautiful picture in a certain catalogue, of a house in Erie, Pennsylvania, completely covered by a thick mantle of this creeper. My single *Euonymus* lives and clothes perhaps ten square feet, which, considering the number purchased, the length of time it has been growing, and the blasted hopes it represents, makes it a very expensive plan.

This may seem a long time to spend on one wretched Euonymus, but if the story makes you pause and consider it has been
worth telling. You cannot depend upon any growing thing to
do its best in your garden, but you can buy things that do
well in neighboring gardens or parks. When these are established take your little fliers in less certain things. You will enjoy
them and have many successes, but don't waste your first few
gardening dollars upon them. Above all, the frame of your
garden must be sure, so for hedges and boundaries choose wisely
and conservatively.



THE GARDEN PLAN

THE man who has many acres and some gardeners can afford to have all sorts of gardens, but on a lot of less than a third of an acre one general type must be decided upon. This is perhaps a blessing in disguise, for there is nothing stupider than to have so much garden that there is no time or energy left for enjoying it. Every garden consumes all the daylight hours in the early spring, and another busy period comes in the autumn, but from the first of June on to the middle of September the wise gardener will undertake only what he can do in half of his leisure time. He will also be very strict with himself as to varieties of plants, numbers of each variety, arrangement and general scope.

Probably the first year you will try all manner of tricky things. A train friend will tell you of a grand dahlia that grows in his cousin's garden, and the office boy will have a relative who grows a vine that will cover the back porch in no time. The young lady who sells seeds in the local seed-store will press upon you certain unknown treasures which, as they cost only five cents a packet, you will purchase, and you yourself will discover magnificent pictures of profuse and highly colored wonders on the packets displayed in the hardware-dealer's window and rush in to buy. You will have gifts, too, from neighbors and friends of the family who are touched that at last you have a little home of your own. These are not all to be sneezed at but they must be taken with a pinch of salt. If they are mysteriously or obscurely named, put them in some retired corner until they have proved themselves. You will like almost anything that blooms the first year. If you don't, your gardener's instinct needs cultivation.

But when the first sad experiences have left their mark, you

come to some settled conclusion as to the kind of garden you will go in for. Almost any kind is good, though round beds surrounding fledgling trees, single rows of cannas running through the lawn, tall iron vases filled with bedding plants and set in a grass plot, or porous rocks arranged in a mound with nasturtiums growing in the interstices, are definitely bad. If you like that sort of gardening you will not like this book — which is, perhaps, to your credit.

It is possible in a small place to have a formal enclosed garden with beds in the middle and borders running around; an informal garden composed largely of borders and little planted corners; a mixed vegetable-and-flower garden; or a green garden of lawn and shrubs with a mass of flowers in one wide border as a feature. Or if you are more definite in your garden tastes, you will have plenty of room to specialize on a Rock Garden, a Spring Garden, or a Wild Garden. Any and all of these are charming; but the house, the situation, and the use to which the garden is to be put must be taken into consideration.

Of course this does not mean that you cannot have a mixture of all these various things, but it is better to settle on a general scheme that conforms with the house, your taste and way of life, and your means, both in time and money, and then stick in the incongruities as accents and for personal reasons. One will cost very little more than the other, as about the same plant-material will be employed in all except in the special gardens. The formal garden requires a little more upkeep because formality is in bad taste when it is not trim and elegant, and the mixed vegetable-and-flower garden will give the most practical service in return for the time spent upon it. It will give you more to take indoors with you while the others will give you more to go outdoors to.

The outer boundaries of the formal garden will probably be the boundaries of the lot and these need not necessarily be a fence

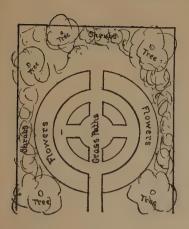
or clipped hedge. The description "formal" is more a matter of form and balance than of straight lines, though the edges of the beds and borders would be clearly defined and probably straight. There would be an axis and some focal point, such as a little fountain or a bench or a garden ornament, or perhaps a massplanting of some plant bolder than the other things that grow in the garden. There would be straight paths and pairs or groups of flower beds in which the planting corresponded and the groups of plant-material repeated themselves. The flower border would be wide enough to run from tall plants at the back to low-growing edging-plants and, like the beds, would repeat its groups and masses. These would be so planned as to furnish something bright and blooming to look at in each direction, and would be more substantial and effective than the flowers in the middle beds, whose chief requirement is mass of long-continued bloom or good and dense foliage-effect. From such a garden not many flowers could be picked, but when a place is small the garden is so near that the house does not require many flowers within it.

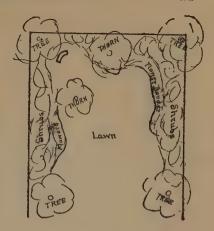
The most serious problem in such a garden — indeed, in every small garden — is succession of bloom; and here knowledge of plants and of local conditions and general ingenuity are most useful. The scheme is easily enough worked out on paper, but will it work itself out in fact? Yes, if you are satisfied with good green masses at certain periods with splashes of annuals or summer-flowering bulbs for color. No, if you think that from May to October banks of color will enclose pools of bloom. "Succession" is only too true a term when applied to flower-planting, and there are very few groups of plants that have co-incident periods of glory. They straggle along one after another, rain or drought or heat or cold doing sometimes beautiful sometimes terrible things to them, while the helpless gardener who has planned it all in deference to and with faith in Nature

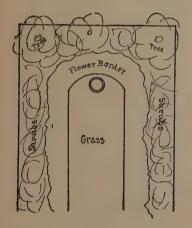
looks on aghast. In fact the seasoned gardener always achieves philosophy or misanthropy, depending upon the percentage basis of his failures and successes.

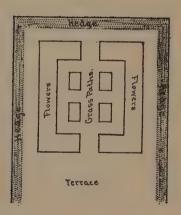
There are innumerable charming plans for inexpensive formal gardens. Of course it must be understood that flagged or brick paths, elaborate fountains, garden statuary, and retaining walls of stone or concrete do not accord with cheapness; but bird baths, sundials, little clipped trees, home-made concrete benches, make interesting features and accents and it may be possible to shop around for some of the more luxurious things and install them very inexpensively by doing it yourself. The older the brick, for instance, the more effective paths it makes, and brokenoff corners make comfortable beds for moss or little rock-plants. Pedestals for sundials may be built of the same brick by laying them together and building them up to the height required. Be on the lookout, too, for old stone or concrete column-bases, which can be bought from house-wreckers and general contractors. If they are a little broken and irregular so much the better. They will make beautiful bases for ordinary big flowerpots filled to overflowing with purple petunias or portulaca or any other annual that blooms continuously all summer with a little care. Water features are, alas, expensive, but a bird bath is easily contrived. Home-made rustic pergolas, if they lead from something to something else, are effective.

Four little apple and pear trees, set symmetrically and by pruning kept about the same shape and height, are pretty and interesting as features. They will begin to flower and bear when they are quite small and add usefulness to their beauty. As a matter of fact, fruit-bearing shrubs should be more used for ornamental effects. Currants make good hedges and good jelly, raspberries will fill very prettily an unused corner or conceal the compost pit. Single gooseberry bushes make handsome









Four simple garden plans

"specimens." Rhubarb is another useful plant whose fine foliage and white spires of bloom, followed by handsome seed-pods, can be very effectively used, and if you try parsley and carrots as edging plants you will find that in some places you will like them very much.

Grapevines on poles or growing over a home-made rustic arbor answer the two purposes of beauty and usefulness. They are as good a vine — and, by the way, in England only grapes are "vines," every other trailing thing being a "creeper" — as any other with which to cover fences. During these past years their adaptability to various climates has been thoroughly tested and varieties may be had that will thrive under almost any conditions.

Little clipped evergreens, either in pots or set in the ground, are inexpensive and enduring and if you happen to have an old thorn- or apple-tree on the place, put a seat under or around it and use it for your central feature. Fortunate are you if you happen to possess such a thing. Unless you are an incredibly bad gardener the charm of your garden is assured. Such a tree may grow in an inconvenient corner but by proper arrangement it will become the nucleus of the plan.

A study of what you have will go far to settle what you want. If, for instance, a big tree or rock or rising bit of land is in a corner or far to one side, it suggests informality of treatment and irregular masses of shrubbery and wide varying borders will lead up to it. If you have two trees fairly symmetrically placed, even if they are not of the same variety or exact size, still they will conform with a square or oblong formal garden set between them or in front of them, and will stand out as features. Infinite instances could be given of this conforming to conditions, which is after all, the true secret of economy; but these few suggestions may open the beginner's eyes to home-growing possibilities.

The informal border garden depends for its interest on the plant material used and the width and line of the borders. These must be wide enough to give space to higher-growing, stronger plants and to enough plants to ensure a reasonable succession of bloom. This cannot be done in less than six feet, and ten feet would be much better. In some places, before an effective planting of shrubs, perhaps, you will want a narrow band of some low plant — such as peonies or iris — which has good foliage throughout the season. This need not be more than three feet wide. In another place a wide bay running out into the lawn must be ten or twelve feet. The line at the back will be determined by the shrub-planting or by whatever forms the background, but the curves of the front edge will make or mar the effect. It is easier to ensure that these curves shall be graceful and flowing if you make a rough sketch on paper and then lay them out on the ground. A simple way to do this is to cut stakes and buy a ball of binding twine and go to work. The stakes will mark the general outline and the binding twine, caught around them, will make the curving edge. Peg it into place and insist that the bed be dug exactly as it is marked. It can be "fined off" after the first general digging is done. If you try to make the beds entirely from measurements, curious protuberances will appear like sore thumbs or narrow-waisted hourglasses. It is strange how all-outdoors modifies outlines and spaces. The trained landscape architect may know exactly how his executed plans will look, but the amateur, even the experienced amateur. will do well to try out each step before going ahead.

In the border garden no formal features such as flowerpots or symmetrically placed trees will be needed, but seats or benches with their setting planted around them, or a bird bath tucked off in a corner can be used with success.

If borders all around the three sides of the lot seem too much

to take care of and too expensive to plant, a beautiful effect can be got by having a very wide border at the far end from the house. This might be very simply and solidly planted with dependable things and its very simplicity would ensure success. Such a garden would have much shrubbery and a good deal of lawn, but as strength rather than skill is required to cut grass, the weekly cutting can be managed without the expenditure of much time or money. It is a very good treatment for a really tiny place, for the border can be wide enough to give the effect of much gayety and bloom. There will be room for early bulbs among the late-blooming perennials, and the early-blooming perennials can be cut back and their places be filled by reliable long-blooming annuals.

The combined vegetable-and-flower garden gives less play for the imagination but it can be pretty and practical. It is necessary to choose very carefully the vegetables you will grow and to make a studied plan for their planting. They must be shifted a little from year to year so that the legumes - beans, peas, and such — will exchange soil occasionally with the root crops. Corn, cabbages, and pole Lima beans require too much room to grow in the small garden, and it is difficult to arrange a succession of peas and beans so as to have all you really want. The difficulty of an asparagus bed is its preparation and the fact that practically none can be cut for the two years after planting, but it is well worth the trouble. New Zealand spinach is an allseason crop that is ornamental and succulent, and all the beets, carrots, onions, oyster plant, and turnips that a small family will consume can be planted in a small compass. One twenty-fivefoot row of tomatoes will produce fresh fruit through the summer and just before the first frost give ripe and green fruit for canning and pickling, while six green-pepper plants and the same number of eggplants will furnish an ample supply. If you must, in the



Make what you have the nucleus of what you want. This garden is made under and around old pear trees

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approved American fashion, have a little corn, plant your early string-beans between its rows and put radishes and lettuce between the rows of slower-growing root-crops. By sowing onions and beets rather thickly you will get spring onions and beet greens when you do the necessary thinning — all of which is too definite for this rather general chapter on garden arrangement, but as vegetable-gardening will not be touched on again, it seems advisable to give a few suggestions here.

A pretty arrangement for this mixed garden is to run a straight path from the house with flower borders on each side of it. The flowers in these border beds should not be too high nor too delicate. Sturdy perennials like sweet-william, garden pinks, Chinese delphiniums, Gypsophila paniculata, and iris, and dependable annuals like zinnias, calendulas, annual larkspur, pansies, and cornflowers would be suitable. The squares on each side of this might be filled with raspberries or left as grass plots, and the line between this treatment and the vegetable garden proper marked by a current hedge running at right angles to each side of the path. Beyond this hedge the flower border would change its character a little and become a row of peonies edged by some lower-growing plant, behind which the rows of vegetables running parallel to the currant hedge would begin. The path would perhaps terminate in a high planting of delphinium, hollyhocks, and phlox, and if more flowers were needed they could be seeded in rows between the vegetables. All this would be gay and practical and pretty, and give the utilitarian gardener with a flower-loving wife deep satisfaction. Remember to choose a permanent place for the asparagus bed and fertilize it heavily. After it is once established your garden will rotate around it.

Grass is so important a part of all these plans that a few suggestions as to its seeding and care seem appropriate. It is after all the cheapest material for paths and ground-cover and while

its upkeep requires time it does not require skill. But - and this is a very big but — be sure to economize by buying the very best seed obtainable. Before you buy anything study the matter carefully and find out what varieties of grass do best in your locality. Then order from some seedsman who specializes in grass seed the separate varieties of seed for your mixture. A pound will seed about one hundred and twenty-five square feet so you will not need a great deal for a small lawn or for paths. Put a little white clover into your mixture. If the seed is good it will germinate quickly, be clean of weeds, and make an even, firm turf. If it is poor it will come up slowly, contain many weeds which will appear first and crowd out the grasses, and show many bare spots. This sort of lawn will exhaust your time and patience and it is the sort you will get from cheap seed. Really good seed will pay for itself over and over again in ease of maintenance and general satisfaction. It may cost twice as much to begin with, say five dollars instead of two and a half; but save the two and a half on something else. The seed, however good, must be sown on well-prepared ground and given sufficient moisture at the start. Sow it on a calm day when the ground is moist, Either early autumn or spring is a good time. It should be rolled after seeding, so that the seed is embedded in the carefully raked black surface-soil. Probably a roller can be borrowed for the few minutes it is needed. Do not cut too soon; and if a drought sets in give gentle and frequent watering. All this sounds fussy and complicated, but gardening at best is a fussy occupation where infinite pleasure rewards infinite pains.

The plans that are given here are necessarily for a typical lot but they can be compressed and expanded, changed from square to rectangular, from round to oblong, lengthened or widened, until they suit almost any conditions. They are given as illustrations more easily understood than descriptions, and presuppose proper preparation, few accessories, and much personal labor in the original making. This last clause may be frightening but it cannot be repeated too often that nowadays it is labor that costs, and it is there you must economize, so do not undertake what you are not willing to carry through. A badly prepared and badly planned garden will always be a trouble and expense. Time, energy, and ingenuity at the start will pay their way in a season or two.



SPECIAL GARDENS

ROCK GARDENS, SPRING GARDENS, WILD GARDENS, GROWING SPECIALTIES

Rock Gardens. Perhaps the ideal little garden for the gardener with little time is the Rock Garden. It can be made anywhere and in a tiny space will furnish variety of interest and effect for tiny sums.

But the rock garden, like all the rest, demands a good beginning or even the rocks will refuse to stay where you plant them. A sloping place is best, gentle or steep, for neither practically nor picturesquely is a flat rock-garden successful. If in your locality there is a native stone, be sure to use it; if not, choose something that looks as if it might be a natural outcropping—not strange, fantastic rocks whose place is in the supposedly extinct beer-garden. Get as many big stones as you can, quantities of little ones, and then plant them as carefully as you might the rarest alpine plants.

This question of obtaining rocks places the chief obstacle in the way, because hauling, even where rocks are plentiful and to be had for the asking, is expensive; but it may be that you have rocks from the foundation of your house or in a neighboring field. Certainly there are many gardeners to whom native stone is easily available and these suggestions are for them.

The soil upon which rock plants can be expected to thrive must be deeply dug and have ample drainage in the shape of broken pots, tin cans, mortar rubble, — if you can get it, — and coal ashes. On this foundation make your soil. Use quantities of sharp sand and powdered limestone and wood ashes and some gravel. You should have at least a foot of this soil over

your drainage foundation. The sweepings from the surface of a limestone road are particularly useful.

And now comes the part that will try your soul. You must put as many of your beautiful rocks under ground as above! Make little hills of them, resting on the foundation, and scatter the prepared soil over them. Let points crop out in unexpected places. Then begin to place the larger rocks. If you are making the garden on a steep slope it is a good plan to arrange them in irregular tiers with little terraces of soil. This is the easiest way and can be made to look quite natural. Always let the rocks lie on the side that gives them natural balance and let at least a third of every rock be underground. Be sure to arrange them to slope inward from the base, so that moisture will creep back to the plant roots, not run out over the rock edges. Make features of the largest boulders by building them out into little promontories. Into the terraces set more of the smaller stones to make little pockets for the different sorts of plants. This sounds difficult and does require a certain amount of hard physical labor. The larger stones cannot be managed single-handed, but if you can get two or three men for half a day the larger stones can be set. The little ones are easily managed.

There are quantities of charming flowers that thrive in a rock garden. The beginning will be made with simple easy things. Later your ambitions will soar to the rarer alpines that are countless. But even these rarer things cost little, as one or two plants are sufficient to experiment with. If they die they die; if they live they increase; so the risk is slight and the reward exciting.

But at the start, to clothe the bare rocks — again I am telling you to cover those precious rocks that give the garden its name — nothing is prettier than Dianthus deltoides (maiden pink), Cerastium tomentosum (snow-in-summer), Alyssum saxatile, Aubretia, and Campanula carpatica (Carpathian bluebells).

Tuck these in between the rocks and before the first summer is over they will be trying to crowd out everything else. Indeed, this is one of the difficult features of a rock garden; the hardier plants grow so rampantly that you must keep constant watch over the less aggressive little things, which they will smother with their compact blankets of bloom.

Many plants that are not technically rock plants go well in the rock garden. Annuals are unsuitable, and the more formal and showy perennials. It is a little difficult to draw a line, because in dealing with flowers instinct plays a large part. Foxgloves (Digitalis) are beautiful, lifting tall spires from behind the larger rocks, but delphinium would be out of place. Bleedingheart (Dicentra spectabile) is charming and graceful among the lower-growing plants, while a peony plant in the same position would be absurd. Chimney bellflower (Campanula pyramidalis) or Campanula lactiflora would be fine if your rock garden is big enough, but Canterbury bells (Campanula media) would be ill placed. These differences exist straight through the list, and upon your choice depends the success of your rock garden.

Among the tall-growing things that must be sparingly used because of lack of space and consistency are — besides the plants mentioned above — meadowrue (Thalictrum adiantifolium and Thalictrum polyganum), Solomonseal (Polygonatum majus), globe thistle (Echinops ritro), and Cimicifuga racemosa. Don't plant these in masses but as single plants, or two or three together, close to the larger rocks. In the less rocky places put forget-me-nots (Myosotis), Iris pumila, flax (Linum perenne), primulas of various sorts, Nepeta mussini, Dianthus plumarius, and such soft gray-leaved plants as Stachys lanata and Centaurea maritima. There cannot be too many columbines (Aquilegia), and Viola cornuta or Johnny-jump-ups — if you can get them — will seed themselves everywhere and forever.



The ideal garden for the gardener with little time is the Rock Garden

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There are innumerable other plants that are more difficult to grow, each of which must have its own little bed made for it, or rather its own little dinner stirred up for it. Saxifrages want lots of lime and stony sand and gravel. They are charming if you can manage them and their name is legion. No less charming are dozens of varieties of tiny bluebells or campanulas. They like lime and sand, and rocks that they can thrust their roots under. There are many interesting sedums that are no trouble at all to grow. The sempervivums are funny little plants that like gritty soil, and all the tiny alpine pinks are most lovely but "pernickety." Other less well-known flowers that do well with reasonable care and soil-preparation are the æthionemas, genistas, epimedium, species iris such as gracilepes and cristata, and the various primulas. There are a number of veronicas like rupestris and repens that are lovely.

If you can get any of the small spring bulbs such as grape hyacinths (Muscari Heavenly Blue), snowdrops (Galanthus nivalis), or scillas or chionodoxas, plant little clumps of them here and there. Species crocuses — like susianus, which is bright yellow and tommasinianus, which is a beautiful mauve and delightful with scillas — should go into this list of tiny bulbs, all of which are cheap when obtainable. Unfortunately during these past years the plant quarantine known as Quarantine 37 has barred all these except crocuses, while admitting tulips, daffodils, and ordinary hyacinths — a distinction which the lay mind finds a little difficult to grasp. In the autumn of 1923 the restriction was lifted for the time being and in years to come a native supply may be forthcoming.

The tiny species tulips and narcissus, which can be bought easily and economically, are also charming. Small groups of them here and there will give infinite pleasure in the early spring before the other things begin to rush about and cover the ground. In the summer they will disappear, to come back sturdier than ever the next year. Be sure to mark their places, because, once naturalized, they will increase and improve.

For a garden that is not too tiny the various prostrate evergreens are excellent — not too many, but enough to give solidity. Japanese yew (Taxus cuspidata) is a beautiful dense green and very hardy. Also it is expensive; but one or two might be managed as an extra. The red runners of a wichuriana rose give variety of form. In fact many roses like Harrison's Yellow, Rosa Hugonis and the various old-fashioned bush roses make fine settings for the rock garden.

The technical rock-gardener and grower of alpines will not concur, but nevertheless it is true, that many plants other than alpines, if properly chosen and placed, fit well into a rock garden. One plant or a mass, a little creeping thing that hugs the ground or a tall foxglove, prim sempervivums or ramping potentillas are equally at home. The expense may be nothing at all or considerable, since most of the effective and colorful plants can be grown from seed, and if you become interested to the extent of trying the rarer plants, one of a kind suffices for experiment.

The maintenance is little enough: keeping out the weeds and restraining the more invasive plants. The start requires hard work and ingenuity and strict adherence to a few rules, which are mainly concerned with drainage. The garden must slope to shed water, the rocks must have a firm balance so that they will not be thrown by frost, they must slope inward to ensure moisture at the roots of plants, and a rocky structure must be provided below the ground as well as above. A rock garden is not a flower bed with stone trimmings; it is a rock bed with flower trimmings; and if it is treated as such, no more satisfactory plaything can be found for the busy gardener who is willing to earn his play by a little preliminary work.

Spring Gardens. If you are fond of green, a Spring Garden will prove very satisfactory. It will provide an abundance of flowers and color from early May to mid-June, and the green of trees, shrubs, and flower-foliage during the summer. No garden is easier and safer, because no provision need be made for succession of bloom and no care but keeping down the weeds is required in the hot weather.

Flowering shrubs play a large part in such a garden, and its bloom begins with daffodils, hyacinths, and crocuses, to proceed through Darwin and cottage tulips to iris and peonies as main features, with innumerable extras of spring-flowering perennials and edging and cover plants. Informal and border plantings are best adapted to such a garden, indeed the earlier bulbs are prettiest among the shrubs, under the trees, and in the grass.

You will want some evergreens in your spring garden, because when the earliest bulbs begin to flower there are few leaves on the trees or deciduous shrubs. Hemlocks and junipers make fine specimens or groups and the informality of the pine is a splendid background. Spruce, above all the blue spruce, is too stiff and regular in a little spring garden and does not compose well with flowering shrubs, though it is dear to the heart of the suburban gardener and your strength of character will be proved if the nurseryman — who loves it even better — does not sell you some baby spruces all gray and glistening.

The first shrubs to blossom are forsythia, whose yellow bells are most beautiful hanging over scillas and chionodoxas: redbud or Judas tree (Cercis canadensis), shadbush (Amelanchier canadensis) and Spiræa arguta. A little later come flowering quince (Cydonia japonica), dogwood (Cornus florida), which is really a small tree, and the various wild and cultivated fruittrees which are delightful associated with bulbs and early perennials. Late in May come bridalwreath and the lilacs, and a little

later still, with the iris and peonies whose periods of bloom overlap in fortunate seasons, such roses as Hugonis and Harrison's Yellow.

All of these shrubs have good foliage and the iris and peony foliage will also survive during the summer. Edging- and coverplants such as pansies, forget-me-nots, Nepeta mussini, Cerastium tomentosum, and primroses do not disappear, and the first three at least continue to bloom spasmodically, so you need not fear a bare summer-garden. There will be no blaze of color, but in warmer climates a green retreat is desirable and everywhere it is beautiful and restful.

Darwin and cottage tulips are best planted on the edges of shrub beds or among the peony plants which will later cover their ripening leaves. They are quite happy poking up through the covering plants named above, and ravishing color combinations can be worked out by using the flowering shrubs as backgrounds, the tulips as the main interest, and the small plants with their gray or green foliage as relief. Some of the earlier irises, like Florentina pumila and Purple King, will bloom with the tulips and add variety of form and color.

Four wild flowers that adapt themselves to gardens with dignity and charm are Mertensia virginica (Virginia cowslip), Aquilegia canadensis (Columbine), Trillium grandiflorum, and Phlox divaricata. There is no more beautiful blue among flowers than Mertensia and it has the added virtue of disappearing entirely and promptly when it is through blooming. It has a long period of bloom for a spring flower and combines with the yellows and whites of daffodils and narcissi and the pinks and mauves of Darwin tulips. Trillium, too, vanishes after its white has turned to pink. It should be kept a little in the background, not because it lacks beauty but because, like the daffodil, its place seems to be under shrubs and trees. The other two are charming with the pointed blooms of cottage tulips, whose color-range, unlike the Darwins, includes yellows and whites.

Perennials that bloom early enough to plant in the spring garden include, besides iris and peonies, foxgloves, Thalictrum aquilegifolium, Dianthus plumarius, various columbines, Oriental and Iceland poppies, and flax (Linum perenne). Many of the rock plants, too, are best in the spring, and a charming edging for tulip borders is a sort of tiny stone-wall of small rocks, made like a miniature rock-garden and planted with arabis, aubretia, forget-me-nots, and such early flowering and very easily managed rock-plants.

I do not say much of snowdrops, grape hyacinths, and the other tiny bulbs because, owing to Quarantine 37, it may not be possible to get them. If they are to be had, plant them anywhere and everywhere. They are the most spring-like of growing things and tie together all other things that bloom with them.

But even without them a spring garden is beautiful and satisfying. Its original cost is perhaps a little more than that of a more diversified garden, because most of the things that go into it must be bought as bulbs or roots and cannot be grown from seed. But a small original supply will multiply rapidly and the upkeep is reasonable. The shrubs will fill the greater part of the garden and in most cases the most beautiful varieties of bulbs are least expensive and once established are permanent. Even May-flowering tulips, which the catalogues tell you must come out each year, make beautiful clumps, more interesting in their varying height and size than the large single blooms of their first year, if they are left alone and their foliage allowed to ripen well. Neither do bulbs require the constant application of fertilizers that other flowers need, nor such careful preparation of the ground.

If you have a thorn tree, a wild crab or two, some Forsythia,

flowering quince, a silver birch, and a hemlock, and plant under and around them some crocuses, daffodils, hyacinths, and tulips; if you have some clumps of iris and peonies and some complaisant little plants whose seeds you have sown the first year but that seed themselves in years to come, creeping around among them, you will have a little garden when you want it most and a beautiful one when something inside you demands beauty.

Wild Gardens. A Wild Garden requires native plant-material. Again you can make no better start than transplanting native thorns and crabs and then adding the many shrubs that grow in neighboring woods and fields. Observe under what conditions the indigenous wild flowers grow and give them like soil and surroundings in your own enclosed space. Many of them may be grown from seed but if you collect them do it very carefully and sparingly, a root here and a root there. Perhaps someone will be building a house in what was once a little flowery wood. You will be a conservationist instead of a destroyer if you do your collecting there. There will be plants quite suited to your climate and soil-conditions that can be naturalized though they may have disappeared from the immediate vicinity, and other suitable things that you will want to try. Get them from reliable sources but not from nurserymen who collect in quantity and ruthlessly.

There is nothing more interesting or personal than this sort of garden and for that reason it is impossible to give detailed suggestions. It must be built up plant by plant, intelligently and practically, with a fine sense of what is available and what can be made available. I once saw a famous "wild garden" in England which was nothing more than an informal garden gone wrong. Peonies and iris grew in neat little holes cut in the grass; garden annuals tried to look like wild flowers; herbaceous plants and shrubs of all sorts were scattered helter-skelter, wildly



A Wild Garden requires native plant-material

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enough, to be sure, but far from naturalistically. In woods and fields things grow in colonies, or a single specimen will have found an hospitable little corner where some accident has established it.

So model your wild garden on the countryside around you. Bring together in it everything that grows there: the things you have got from the roadside in sunny, dry spots; the things from the woods under the trees; swamp things in a low wet spot. It will cost next to nothing, and each thing will be a little more beautiful than it was when you found it, if you have done your best by it in the way of soil, position, and care.

Growing Specialties. Until you are a seasoned gardeneryou will not find out just what you care to specialize in, so perhaps this heading is out of place; but where there is limited time and space and an ardent desire for growing things, a certain need is satisfied by growing some one variety of plant really well.

Species, the wild types from which our modern flowers are bred, are interesting to experiment with, and all the subjects that have been hybridized until their varieties are legion are suitable. Tulips, daffodils, iris, peonies, phlox, delphiniums, dahlias, gladioli, and lilies are some of the number.

But specializing soon turns into a rather expensive hobby as you begin to want the newest and rarest — which are by no means always the best. It also has the disadvantage of providing flowers through a very short period; but it offers an absorbing recreation for the would-be horticulturalist with a tiny back-yard and a taste for experiment.

THE FIRST CHOICE OF PLANT MATERIAL

Now you are ready for the beguilements of the catalogue, which is a pure joy in the early spring and a bitter memory in midsummer. The nurseryman probably is no less scrupulous than any other man of business who has wares to sell, but he manages to convey an impression of ease and surety which the seasoned gardener accepts with reservations and due allowance for a percentage of failures.

Here your more noticeable economies begin. Hitherto the economy of spending a certain amount of money by way of saving it later has made gardening seem rather expensive, but in the wise purchase of plant-material real and tangible sums can be saved. This is where the value of a planting-plan shows itself. Everything in every catalogue sounds indispensable but, if you are wise, for the first year or two you will leave novelties alone and stick to the old stand-bys that are proved to be suited to your climate and conditions. You will concentrate on a few varieties of each of these, thus cutting down expenses by buying at dozen- or hundred-rates, — three can be bought at the dozenrate, twenty-five at the hundred, - you will not buy plants of anything you can grow from seed, and you will buy only those things for which a place is ready and waiting. This sounds overconservative and lacking in the careless rapture of most gardenlecturers and book-writers, but it is a practical and rewarding method of purchase and you will not be sorry if you follow it.

Herbaceous plants that cannot be readily grown from seed are iris, peonies, phlox, Japanese anemones, hardy chrysanthemums, Gypsophila paniculata flore pleno, Heuchera, Sedum spectabile, bleedingheart, Nepeta mussini, aconite, and the named varieties

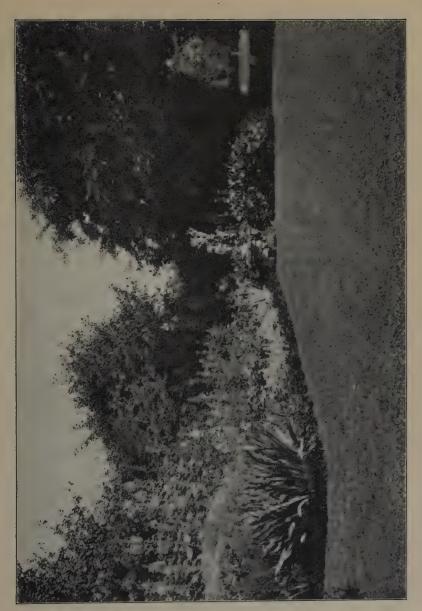
of delphinium, Oriental poppies, and so on. Those that can be raised from seed in quantities and with ease are delphinium other than named varieties, columbine, foxgloves, hollyhocks, campanulas of all sorts, Anchusa, Dianthus, sweet-william (Dianthus barbatus), Pyrethrum, lupines, Primula, Thalictrum, most of the edging plants, Linum (flax), and all of the annuals except such bedding plants as geraniums, heliotrope, fuchsias, and so forth.

Varieties of iris and peonies are a study in themselves and the many sorts in similar colors, all costing about the same, are confusing to the inexperienced gardener. It is safest to begin with the standard varieties that have stood the test of years, and here let it be stated that standard varieties are usually good except where recent development has crowded them out for better and newer things. They become standard because they have proved themselves, and since they are always in demand the supply must be large and prices are consequently reasonable. What makes for expense in the new varieties is the long period of time that must elapse before a sufficient supply is created. For instance, a new iris appears, either by accident or through artificial hybridization, from a seed sown three years earlier. That year there is one flowering stalk and the root may perhaps make sufficient growth that summer to be divided in the early autumn into two plants. Then increase by geometrical progression begins, but it can be seen that the rate for the first five vears is very slow. By the time the new variety is ready to be put on the market its originator has grown it perhaps for six years. If it is a success, he reaps glory and little else; if it is a failure, it disappears from all but very large collections. But when the stock is once disseminated the originator loses all control over his creation and growers here, there, and everywhere enjoy the benefit of his long task. Peonies take even longer to

establish a variety, while new forms of delphinium may be grown in a year but will not come true to seed. They must be propagated by division and cuttings. Roses, flowering shrubs, tulips, gladioli, dahlias all follow this course, some arriving quickly, some slowly, at maturity of bloom, and you who are about to begin your gardening career are the inheritor of all the patience and the work that have gone into the achievement. Think of this and be grateful while your garden grows and blooms.

Taste will, of course, play a large part in the selection of plants, but suitability, which is the application of taste to a given problem, is even more important, and the little garden close to the house demands a certain elegance in its plant-material which is quite independent of expense. Detail counts more than it does in a large garden and space is too valuable to be used for second-rate varieties. Everything which occupies that valuable space must be worth having and the plant-material must be so arranged that each variety flatters and sets off its neighbors. Indiscriminate purchase of everything that the catalogue praises will not achieve this result, and as a start it is much better to have larger masses of a few sorts with which you are familiar than small groups or single specimens of every sort and kind of perennial and annual that can be induced to grow.

A good start is to pick out the plants that give substance and form to a garden and build up around them. Most important of these are peonies and iris. Both are delightful from the moment their red and green noses come poking up in the spring until they are almost the only green things left in a leafless garden. Their varieties are so many and confusing that they will be dealt with later. Peonies are not very expensive unless you must have the very new and rare varieties. They fill large spaces throughout the season and may be left undisturbed for years.



Diversity of form and green masses contribute more than color to a successful border-planting



A start can be made for five or six dollars, but the plants must be carefully chosen. Irises are cheap, as they cost little to begin with and must be transplanted about every three years, your stock increasing enormously each time that this is done. In fact you will find fellow gardeners eager to bestow upon you a gift of iris; but unless you know and have seen in bloom the varieties offered, it is better to spend a little money. He who gives may well be more amply blessed than he who takes.

Next in importance and difficulty of choice comes phlox. Confine yourself to a few varieties and to the beautiful early white *Phlox suffruticosa* Miss Lingard, which has glossy green foliage and blooms toward the end of June with charming effect. It will continue to bloom for a long time from side shoots if the first flowering spikes are cut off. Later varieties are Frau Anton Buchner, pure white; Elizabeth Campbell, salmon pink; W. C. Egan, pale pink; Antonin Mercié, pale lilac. Elizabeth Campbell and Frau Anton Buchner are rather low-growing and make an excellent pair — or rather an excellent contrast. These two, with Miss Lingard, will be all that are really needed, but the other two are suggested for those gardeners who like "pastel shades" and less sharp contrasts.

By all means spend part of the money set aside for the purchase of plants upon Gypsophila paniculata in either the double or single form. The latter gives a misty gray effect, the former is whiter and more compact-looking because of its larger and showier flowers, but both are supreme harmonizers, tying together and emphasizing the brighter-colored and more noticeable plants. The single form may be grown from seed but it takes a long time for the little plants to grow big enough to count. Seeds of the double form are listed but the chances are much against an even moderate percentage of double-flowering plants. It is hard to buy, too, and rather expensive; but if it is left

undisturbed, each plant will develop in a few years into an enormous white cushion in late July and August and you will feel that your money is well spent. The single form blooms a little earlier. They should be planted in the place where they are expected to live, and never disturbed.

Bleedingheart (Dicentra spectabilis) you cannot get along without, but you will have to buy the plants and pay a good price for them, at least fifty cents each. If you can't afford more, two will do, and the rosy red flowers set along arching green stems will give pleasure, amusement, and sentimental joy. It is the most difficult of all the flowers to believe in. It seems impossible that its two rounded segments, making a little heart from which oozes a blood-red drop, could just grow. All children love and admire it. For many of them it is the first flower-memory. It is best in a small garden as a specimen plant set by itself, it knows so well how to dispose its branching stems. There is a funny little variety called Dicentra formosa — or sometimes Dielytra formosa — that is an excellent shade-plant. It has very finely cut pale-green foliage that persists through most of the summer and a no-account little flower that for no particular reason is attractive. Few nurseries list it, but perhaps you can find a tiny bit to start with, and if it likes you, in a year or two you will have more than you can use.

Aconite or monkshood (Aconitum) is a plant with several varieties, but for the little garden only napellus or Sparks variety need be considered. The first is a palish blue, the latter a deep indigo and very handsome. In a wide perennial border its vine-like sprays give a new and different accent, they grow so tall and detach themselves so from each other. The bloom lasts for a long time, and though for the first year or two it is rather scanty, in the third year the plants will be very large and send up quantities of flowering sprays. The foliage of both varieties is dark

glossy green and the flowering stalks rise well above it. Sparks variety is more expensive than *napellus* and you will not find it in many catalogues, but it is worth the expense and trouble.

To complete the list of taller plants, that must be bought as plants, are Japanese anemones and hardy chrysanthemums, both of which bloom in the very late summer and continue until a heavy frost. Anemone japonica alba is a single variety more charming than the double sorts of which there are several: Whirlwind, white; Queen Charlotte, pink, and so forth. It is far from easy to establish, so know exactly where you want it and plant it there for all time. To start with it is not an economical plant, because although it costs but two and a half or three dollars a dozen, it may not "take" at the first planting and may have to be replaced. But include it in your budget if possible. It possesses just the right sort of elegance for the little garden.

Hardy chrysanthemums are not dependable in the northern garden. They take up room all summer and then, if cold weather comes early, their flowers are nipped and refuse to mature. But in recent years much attention has been given to producing early varieties with very satisfactory results. Frosts do not seem to come as early as they used to, either, so hybridizers and the weather have combined to make hardy chrysanthemums a flower for the little garden. They are splendid at the back of a border, where they have been concealed but not encroached upon during the summer, and you will be so grateful to them when they do bloom. There are many varieties; it is better to pick out the kinds marked "very early" in the catalogues and then further consult the nurserymen as to the very earliest and best for your locality. The newer varieties will be more expensive than the older ones, but they will pay their way better and not throw away the work and space expended upon them.

Of the lower-growing flowers only Nepeta mussini and Sedum

spectabile need be bought. They may both be classed among the indispensables — nepeta for its gray-green foliage and its misty bluish-mauve flowers which grow with abandon all over the place, sedum for its prim formality and sterling character which keeps it always in its place. Nepeta is an edging plant or does well in the rock garden while Sedum spectabile makes a magenta and pale green cushion about a foot tall. It is excellent to use in front of some leggy plant whose bloom is all at the top, or the sort of thing that loses its leaves in drought or is subject to rust. Altogether it is a useful plant that most new gardeners consider rather ugly and unnecessary, but plant it on faith and at the end of five years you will class it among your treasures.

Everything else that the little garden needs in the way of flowers can be grown from seed at a trifling expense of money and trouble. There are many of them, — too many if you do not keep a firm hold upon yourself and stick to the dependable ones, — so they will be given a chapter to themselves.

There are also a number of plants that need cost nothing at all. They grow along the roadsides and railroad tracks and in dusty wayside fields, and if you dig only what you need and one here and there, and stick back disturbed clods, and generally respect Nature and the other people who are coming along that way, there is no reason why some of them should n't be given a chance to thrive and improve themselves in your garden.

The big purple New England asters, for instance, will grow twice as big and tall in garden soil and with cultivation. A dozen small clumps will never be missed and in good soil they will make a dozen glorious masses. Meadowrue increases the size of its blooms and grows tall and leafy before an interested audience. Wild geranium is pleased to reward the attention bestowed upon it by the truly careful digger. All these are fine in a border, and though collecting is sternly frowned upon by conservationists,

whose opinion is worthy of all respect, a basket or two of these very common and quickly spreading plants they will not begrudge. The unforgivable sin is to pick and throw away, to dig and forget to replant, to destroy a whole colony for a handful of roots. Every really good gardener is a conservationist within and without his garden.



ROSES, IRISES, AND PEONIES

Roses. Sentiment would proclaim that a garden without roses is unthinkable. Nevertheless, in some climates and soils roses are an extravagance and a failure. Planted in the spring, they live through a summer, contracting all the various diseases a rose can contract, and when their wrappings are removed the following spring some little brown twigs are all that is left of them.

The rose is really a specialist's flower and as a specialty may be grown in the little garden. In itself it is very beautiful, but it is not an effective plant and does not compose well with other flowers. Certainly it must be grown in beds by itself and if possible it should be given a garden by itself. If you must have roses, set aside a corner for them; or if yours is a formal garden, plant them in the centre beds, with your perennials and annuals in the borders surrounding the garden.

No matter how much you love roses, first, you should find out from neighboring gardeners what their experience has been and accept the advice they have to offer. Anywhere roses can be grown as annuals, that is, planted each spring to bloom for the summer months, but rose plants are expensive, and if they must be renewed each year you will have little money left to buy more enduring and dependable plants.

If in the face of difficulties it is decided to grow roses, be sure that the beds are properly prepared. Drainage is essential, and deep digging. If your garden is tile-drained, the beds should be excavated at least eighteen inches deep; if not, much deeper and the bottom filled with rubble, bits of brick, stones, broken pots, and all such rubbish, that will not pack closely but will allow water to drain through. At the very bottom, if tile-drained, on top of the loose material if the other method of drainage is used,

place the sod taken off the top of the bed, grass-side down. Discard some of the subsoil and mix the rest thoroughly with the top soil, adding some very well rotted cow-manure, and, if the soil is stiff and sticky, a little sand. Reserve some of the topsoil to sift in around the roots of the plants so that they will not be touched by the manure which may burn them. If it is impossible to get cow-manure, — which it is in many districts, — use sheepmanure, which may be bought in sacks from the nurseryman.

Unless you have some very good reason for doing otherwise, always plant in the spring, which gives the roses time to become established before winter. You will read of pot-grown and field-grown plants; of own-root and grafted roses. Get field-grown plants when you can. The discussion about grafted and own-root roses has waged for many years, so do not concern yourself too much with this issue. Stock from a reliable nursery will be good enough for any but the seasoned and cranky rose-grower.

In planting, see that the plants are set deeply in large enough holes and that the soil is well packed about the roots. It is a good plan partly to fill the hole and then to pour in a copious supply of water. Repeat this process until the neck of the plant is well covered and trample the soil so that it is firm. Then cut back all of the branches about one third. Eighteen inches each way is the very nearest roses should be set. Two feet is better. As blooming-season comes on, dig in around each plant a trowelful of bone meal and Scotch soot, which improves the color, and when aphides appear on the new shoots, which they are almost sure to do, drown them off with tobacco tea. If the pest is fat green worms, use Paris green; if mildew, flower of sulphur; if "black-spot," which you will recognize when you see it, Bordeaux mixture; if rose bugs, which are almost inevitable in a

¹A dust spray for black-spot, called "three-in-one," and consisting of sulphur, arsenate of lead, and nicotine, has recently been introduced. It cannot be used with safety or comfort on a windy day.

sandy soil, pick them off and crush them, or drop them into kerosene, or try some of the various remedies advertised. (See Chapter IX.) There are elaborate spraying-calendars for roses, which should be followed in large gardens, but when the garden is small and of supreme importance to its owner and the rose-bushes are few, watchful care and a prompt use of the indicated remedies is best.

The beds in which roses are planted should be, when the soil is settled, a little below the level of the surrounding grass, and should be persistently cultivated. It is possible to plant low-growing flowers such as pansies, lobelias, and forget-me-nots as a ground-cover, but this interferes with cultivation and the roses will succeed better without them. It is for you to decide whether you prefer specimen blooms or good general effect. If the summer is hot and dry, a mulch of grass-cuttings will keep the moisture in and the heat out.

Winter covering is very important to success with roses, spring covering even more important. The best method is to draw up the soil around the tops. An extra supply of good black dirt will be needed to make the little covering hills large enough to perform their function. The long canes of climbing roses can be taken down and covered with soil or bound up in straw and laid on the ground. All this should be done fairly early, before really cold weather sets in, and unless the spring is very early and the plants begin to grow under their covering, mid-April is early enough to remove the protection. There is always danger of the growth which has survived the winter being injured or even killed by the warmth of the sun by day followed by cold and even frosty nights. This spring "burning" of all perennial plants causes more damage than the coldest winter.

The same difficulty is met in selecting roses as in choosing other popular flowers that have been hybridized extensively. The newer sorts are expensive, which bars them in any quantity from the economical garden. All are more expensive than before the war, partly because Quarantine 37 excludes them, partly because of the increased cost of labor.

A little China rose which is perfectly hardy and can be used in any garden is Hermosa. It is a bright silvery pink and blooms through any but a very hot and dry summer. In good rose-climates it becomes a small bush and though it is not conspicuous like the newer and larger roses, it is charming almost anywhere—particularly for bordering paths with a lower edging of some one of the flowers mentioned above or a gray-leaved plant like Stachys lanata or Cineraria maritima. (An inconsistent statement, but good gardening is a succession of inconsistencies.)

After the old-fashioned bush roses, Hybrid Perpetuals are the hardiest but they lack the delicacy of the Hybrid Teas. The first bloom profusely in the early summer and again not quite so freely in the fall, while teas have a burst of bloom at the beginning of the season and flower more or less throughout the summer and autumn. It is with these that most of the hybridizing is done, and most lovely flowers have been developed both in America and abroad. Some of the inexpensive and easily grown varieties of the two types follow.

HYBRID PERPETUAL ROSES

Frau Karl Druschki: A very large white rose which is covered with blooms in the early summer and again in the fall. Much admired for its size and substance. Very hardy.

Magna Charta: A fine bright pink and a very vigorous grower.

Mrs. John Laing: A beautiful silvery pink flower with long slender stems. Blooms very freely and is charming when it first opens. Ulrich Brunner: Bright cherry red with satiny petals. Very large and fine of its color and very hardy.

HYBRID TEA ROSES

Caroline Testout: A thoroughly dependable silvery pink rose which blooms almost all summer. It is not so beautiful as some of the more delicate roses but is very hardy and satisfactory.

Killarney: This is the same rose used so extensively by florists, but in the garden its form is more graceful, though the flower is not so large nor the stems so long. A very fine bright pink.

Los Angeles: A beautiful coral-pink, shading into yellow. It blooms well throughout the summer and is a very fine large flower.

Mme. Edouard Herriot: A charming flame-colored rose. The buds are lovely and the opened flower prettily formed. It is not a very vigorous grower, but its color and form make it worth growing.

Mrs. Aaron Ward: A small compact flower of a coppery yellow tone.

Very dependable and pretty.

Very dependable and pretty.

Mrs. A. R. Waddell: much like Mme. Herriot, but of a paler coppery tone.

These are a few only of the many good roses with which to make a start. By observation you will learn others that are equally desirable and equally inexpensive.

Of climbing roses, none is better than the rambler Dorothy Perkins, which will grow almost anywhere. Emily Gray is a large-flowering rose of a delightful yellow; Lady Gay is a brighter pink than Dorothy Perkins. The last two have compact little flowers which appear in masses in the early summer, after which the canes grow vigorously all summer but no further flowers appear. Another magnificent trailing or climbing rose is Silver Moon, whose big white flowers with yellow centres are set among shining green foliage; and Tausendschoen is a moderate-sized pink rose with immense clusters of flowers and handsome foliage.

Bush roses such as Harrison's Yellow and Mme. Plantier have been mentioned among shrubs; and wild roses, particularly the beautiful climbing or spreading Rosa setigera, should be used in every garden where there is room. Moss roses should not be neglected either. Their buds are like old valentines, and the bouquets that they make have a charm all their own.

In damp climates the ramblers, such as Dorothy Perkins, are best for arbors and porches. They will grow very tall and strong and bloom almost too profusely. In less favorable climates they cannot be depended upon to reach up and cover pergolas and tall fences because the canes may die back during the winter and spring, but for covering banks or low walls they are always good.

Irises. Except for the fact that after the middle of July there are no flowers, the small garden might well be planted entirely with irises. There are so many types and varieties that interest never flags and through May, June, and part of July there is always something beautiful to look at.

The season opens with the small species irises, which are, perhaps, a specialist's flowers, followed by dwarfs such as pumila, after which the Pogoniris, Iris germanica, or tall bearded irises, as they are variously called, begin to bloom. A little later comes Iris sibirica and the later species such as tectorum and pseudacorus, and last of all the Japanese iris (Iris kæmpferi). Spanish, English, and other bulbous irises are not considered, since they are hard to get and not essential in a small garden.

Nothing is easier to grow than irises and the standard sorts, once planted, increase almost alarmingly. But contrary to the popular idea, they like a dry sunny position rather than a damp one. Planted in an open border they will bloom their best. One necessary precaution is to see that no manure is dug into the soil where they are to be planted. This will rot the rhizomes — as their tubers are called — and destroy them. The ordinary garden soil, well dug, with a little bone meal and powdered limestone incorporated into it, will give exactly the nourishment they like. Holes must be dug deep enough to accommodate the long, strong roots which grow down from a rhizome, but the rhizomes themselves should be set just under the surface of the soil twelve to eighteen inches apart. Every third or fourth year they must be divided, — a process which requires care but becomes

easy with practice. The essential is to be sure that each piece of root has two or three good "eyes" which are easily recognizable, and an ample supply of roots. This division should take place as soon after blooming season as possible and never later than the first of September, and it is a good plan at the same time to enrich the soil again with some bone meal, sweeten it with more limestone, and sterilize it with some powdered sulphur. Heavy clumps of iris are attacked sometimes by rot, which should be carefully cut away. The sulphur will help to keep it away. Do not water the iris while or after it blooms, and if the season is damp clear out and destroy all foliage that rots at the base, at the same time dusting in a little sulphur. Diseases are few and most of them can be overcome by sanitation, that is, burning roots which have been attacked by rot, cutting out unhealthy portions, and cleaning out grubs which sometimes dig themselves into the rhizomes. You will learn the requirements of the individual varieties as you watch them develop.

The Japanese iris is a very handsome plant when it flourishes, but it requires room and has a very short blooming season, so do not plant it unless you feel it is the one thing required in an effect you are striving for. Unlike *Iris germanica*, it requires a great deal of water, especially just before and during the blooming season, so the two are not successful associates. It should not be disturbed when once planted. It roots deeply and establishes itself for life. A beautiful and cheap white variety is Gold Bound, and a fine blue-purple is Blueflag.

Iris sibirica is like a small Japanese iris with the same slender foliage and habit of establishing itself permanently. It requires no special care or conditions, and is very pretty toward the front of an informal border. The standard varieties are Blue King and Snow Queen, whose names are descriptive of their colors. They bloom between germanica and kampferi.

Iris pumila is a tiny germanica and is very pretty to cover a bare patch of sunny ground. It is charming with colors all mixed together, so unless you are a specialist buy a good collection and plant it hit or miss. These require the same treatment and conditions as germanica but bloom much earlier. Other dwarf irises are mentioned in connection with rock gardens.

But to most people "iris" means *Iris germanica* or the "tall bearded irises," as they have lately come to be called. Their varieties are innumerable and confusing and each year sees new ones; but as with many other flowers the old sorts are beautiful and cheap. Their season begins with *Iris florentina*, which is almost white, and Purple King, which is a deep, fine color with a large bloom. These two may be counted upon to bloom with the late tulips. After these comes what might be inelegantly called the "main crop," some a little earlier than others but all overlapping and flowering at substantially the same time.

In choosing these varieties, decide on the range of colors you need for the effect you have planned. I confess to a preference for flowers whose standards — the upstanding central petals — are about the same shade as the falls, — the petals that flare from the stem and along whose centre rib runs the yellow beard, — so for a bluish-mauve I would choose Pallida dalmatica, a very old iris that has been improved upon in its variety, Celeste. For deeper purple is Violacea grandiflora, and for a shade between, Juniata, another Pallida dalmatica seedling. Other good and inexpensive purples and mauves are Amas, Alcazar, which has bronze shading in the falls, Kochi, and Monsignor, whose falls are red-purple.

With iris, "pink" means the shade which in silks is called "orchid"; and there are many beautiful ones of a lighter or darker tone. Her Majesty is a very pretty one which makes a compact and sturdy plant and is a delightful color. Queen of

May is a very old iris which is still good and very cheap. Caprice is a deeper color, very like Her Majesty in form. Lohengrin is a good color but less attractive in form.

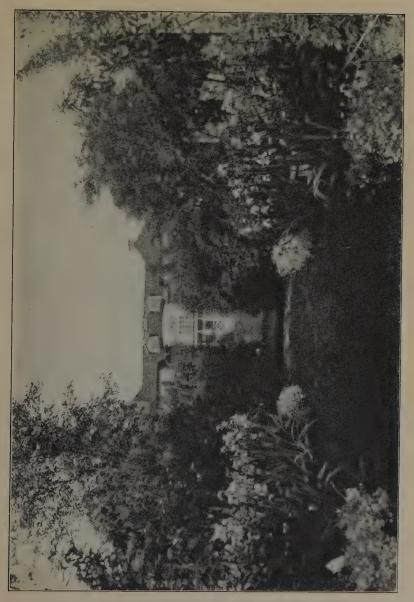
For a connecting link between the blues, purples, pinks, and yellow are Jacquesiana, which is a coppery crimson with brown shading, and Prosper Laugier, which has lighter standards and darker falls. Next come the yellows with purple falls, among which Nibelungen and Lorelei are good and cheap. Flavescens and Aurea are two very old, very dependable, and very pretty yellows; the first a pale sulphur, the second, as its name implies, golden yellow.

Fairy is white, veined with red purple, and Nibelungen with Blue, while Albicans is pure white and Mrs. Horace Darwin just tinged with purple at the base of the falls.

No one of these irises costs more than thirty-five cents if bought singly. All are cheaper by the dozen and some cost next to nothing. For a small garden three of a variety is an ample supply and when they are divided, their second or third year of growth, you will have an astonishing number of plants.

One of the special charms of irises is that they retain their foliage throughout the summer and so make a splendid border-plant, giving variation of form and masses of gray-green to break the monotony of the summer border, which must depend so largely upon annuals for its richness and color. This matter of good green plants is neglected by the beginning gardener, but with experience its importance becomes more and more apparent. Try to consider it an essential even in your first year's garden and you have taken a long step toward success.

Iris time in the garden is a season of delight, so many shrubs are in bloom and so many little late spring flowers. Columbines and single peonies are opening their first flowers and foliage is freshest and greenest. It is an untroubled season before the



Peonies and iris in a June garden

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summer calamities begin — for no garden escapes its tragedy. Plant irises and have a week or two of untroubled enjoyment. They ask very little of the gardener and ornament the garden with lavish display.

Peonies. The peony is another flower beloved of hybridizers and therefore difficult to select from the many varieties listed. In recent years magnificent flowers have been produced, but among the older and inexpensive ones are still numbered some of the best.

Every garden must have peonies, though the small garden will not have room for many. Even more persistent than that of the iris is its fine foliage of various shades of dark green, and the flowers in their season are spectacular in their beauty but so delicate and finely formed that in spite of their great size they are never coarse.

Once properly planted, success with peonies is a foregone conclusion, but the ground must be properly prepared and the plants must be faithfully cultivated. The roots strike very deep and spread wide in every direction, so if you are not prepared to make and fertilize a whole border, at least give each peony a carefully made bed two feet and a half in diameter and fifteen or eighteen inches deep. If manure is used in this bed it must be very well rotted, and many authorities claim that it is unsafe even in that state. Bone meal and compost are better and in the spring more bone meal, a small quantity of wood ashes and a watering with weak liquid manure will produce fine plants and beautiful flowers. Peonies may remain undisturbed for ten or twenty years, so treat them well at the beginning.

In planting peonies the root should be placed in a hole big enough to receive it without bending the long roots, with the eyes two inches below the surface of the ground. The soil should be firmly pressed around and between the roots and settled with a heavy watering. The first year a little protection should be given in winter of leaves or cornstalks, — never manure, — but after the plant becomes established winter covering is unnecessary. If your climate is a cold one and your plants thoroughly healthy the tops may be cut and allowed to fall over and around the root, but no covering is better than too much. Plants should never be set less than two feet and a half apart each way and three feet is better. Cultivate and give plenty of water before blooming-time in the spring and never at any season allow weeds to grow in the beds. They will steal the moisture and nourishment from even so vigorous a plant as the peony.

Peonies do not become really established until the third year, so do not be discouraged if your first flowers do not live up to their catalogue descriptions. When they have settled themselves and feel at home they will not be disappointing. Their diseases are few and rather obscure. Consult a good specialist's catalogue or a neighboring grower if alarming symptoms appear.

When choice is restricted by motives of economy it is easier to decide just what to buy, but do not get anything that is not named and described in the catalogue and be sure that those you buy are desirable types. The bomb, semi-rose, or rose types are much prettier than the older crown-form. This last rises high in the centre of the flower with a ruff of larger petals at its base. The others are more loosely formed, the most charming in my opinion being the semi-rose type, which is not so double as the other two and shows yellow, pollen-bearing stamens. Single peonies are too little used, though most beautiful. They bloom early and have a short season, but even in a tiny garden a spot should be found for two or three white and pink ones. These may be ordered from a good grower simply by color. They do not require quite so much room as the more compact double plants.

Old Festiva maxima, which was introduced in 1851, is still one of the best of the whites. Its huge flowers are almost too heavy for its stems and it blooms a little earlier than any of the others. The splashes of red on its inner petals make its white seem whiter. Couronne d'Or is a charming flat white flower with noticeable yellow stamens which give it its name, "Crown of Gold." La Rosière—"The Rosebush"—also lives up to its name. Its flowers are not large but grow in great clusters above shining leaves. Both of these are rather late. Other fine whites are Avalanche, supposed to be identical with Albatre, Marie Lemoine, which is ivory white, Mme. de Verneville, M. Dupont,—very late,—and Duchesse de Nemours, which is the nearest to yellow of any of the cheap peonies and has a delightful fragrance. The half open bud has a lemon tinge but it opens into a less attractive form and fades white.

Eugène Verdier is a charming semidouble pale pink flower that grows in clusters on rather weak stems, and Asa Gray, though a little more expensive, is all that a pale pink peony should be. Its rose-type flowers grow on long stiff stems and are truly beautiful. Mathilde Mechin is a pretty pale pink with an apricot tinge in the opening flower, and Livingstone is a late and rather tall silvery pink of rose type.

In deeper rose pinks are Modèle de Perfection, Grandiflora (Richardson), and M. Jules Elie, which is a gigantic early flower of the crown type. A still deeper rose are Beauté Française and Edulis superba, and good reds are Felix Crousse, officinalis rubra plena, and Louis van Houtte.

Any one of these may be bought for less than a dollar and most of them are about half of that small sum. For the little garden one plant of each shade will perhaps be enough, and to make your final selection you should visit some nursery while the peonies are in bloom. It may be that the exact season of bloom will

influence your choice, or the height or general habit of the plant, but be sure to select carefully.

Some year when you have a little extra money to spend, or if someone should wish to make you a present for your garden, get Sarah Bernhardt, Thérèse, Reine Hortense, Baroness Schroeder or Lady Alexandra Duff. These are more expensive but very beautiful. The peony plants usually offered are what is called "strong three- to five-eye divisions." Get these in the cheaper varieties, but if you are patient the more expensive sorts may be bought most reasonably in what are known as "one-eye divisions." It is a long time before these grow into good flowering plants, but they are worth waiting for and the little room and care they require are an excellent investment.

No plant has more permanent value than the peony. It gives substance and dignity to the garden and composes well with almost any of the garden flowers. The first investment for roots is small and in the end it is a true economy.

The list of varieties given in this chapter is very incomplete and necessarily reflects personal taste; but it cannot be too often said that success in the small garden depends upon growing a few things well. All these varieties are pretty, dependable, hardy, and cheap. Others not mentioned may also have all these qualities, but no small garden could contain all the varieties named and longer lists would confuse rather than suggest. So in your first garden-venture rely upon the experience which makes the selection and add or subtract when personal taste, increasing knowledge, and your own garden experience lead you to do so. But never let the nurseryman give you something "just as good" as the thing you seek, and never buy roses, irises, or peonies except by name.

¹ Editor's Note: The last and best word on the Peony is Mrs. Edward Harding's Peonies in the Little Garden, published in this series.

VII

WHAT TO GROW FROM SEED AND HOW TO GROW IT

You can always tell gardeners born by the way they use their thumbs: they have a way of dabbing the soil around the roots of little plants and handling seeds and seedlings with thumb and forefinger, that cannot be taught. But there are tricks of the trade that can and must be learned before the little garden can be either successful or cheap.

The original preparation of the soil has already been dealt with, but for seed beds and seed pans special care must be taken, particularly in the case of very tiny seeds. Ruling out the greenhouse as an extravagance which even the owners of big gardens cannot always afford, the ideal for the little garden is a small hotbed and a cold frame built side by side.

Extreme confusion seems to reign in the mind of the beginner as to which is which — and why. This is probably the result of that strange silence on the part of lecturers and writers as to fundamentals. They assume certain facts to be known and build their theses on stilts instead of resting them upon solid foundations. I have sometimes wondered if, perhaps, this method was adopted because of a certain vagueness on their own part, being theorists instead of practical gardeners. We hear of "dirt farmers," and there are "dirt gardeners" too, who grub about on their hands and knees and through instinct or enthusiasm really work as if they were paid to do it. In the end they are paid in terms of beauty and satisfaction.

At any rate, the difference between a cold frame and a hotbed is this: the cold frame is a shallow wooden framework sunk about eighteen inches below ground-level and rising from six to eighteen inches above it, sloping upward from the front to the back.

This frame is filled with well-prepared soil which has been mixed with well-rotted manure, sand, a little bone meal and powdered limestone, and thoroughly pulverized. In it are placed little plants too tender to be exposed to winter weather unprotected or summer seedlings not strong or large enough to be set out in the autumn in open ground.

The hotbed is a less simple contrivance though built on the same general plan. It is much deeper, two feet at least, and is used for forcing seeds and plants in the early spring by creating artificial heat through the fermentation of fresh manure. This is placed in the bottom of the frame, packed well down and covered with about six inches of the same soil used in the cold frame. After this is done, sash is placed over the frame and for two or three weeks fermentation goes on unchecked. Great heat is generated and not until the early stages are over can seeds be sown. A thermometer thrust into the soil should register uniformly eighty-five to ninety degrees before the hotbed is ready for use. Since heat from beneath, light from above, and carefully prepared soil give ideal conditions for growth, a wellmanaged hotbed is its own reward.

In other words, the purpose of a cold frame is to protect, that of a hotbed to force, growth.

The ordinary hotbed sash which may be bought ready for use is three feet by six feet, so cold frames and hotbeds should be built in units of that size. For the small garden one sash each should be enough, and for convenience the two may be built side by side. They should always face south with the higher protecting back-wall to the north. For summer use, to protect from too hot sun or heavy rain, a frame of laths with cheesecloth stretched over it or laths arranged slat-wise on two two-by-fours to hold them rigid will be convenient and can be easily made. They are particularly useful in seeding perennials because these are started

in late June or July when the hottest days of the year are on the way and the only rains are likely to be sudden and torrential thundershowers. A new material called cell-o-glass has just been put on the market, which is supposed to have all of the virtues of glass and none of its drawbacks. It is said to be very light and easy to handle, it does not break, it does not radiate cold or concentrate heat. It is worth looking into, as it could be stretched on homemade frames which would cost next to nothing. But care must be taken that the frames fit closely and well.

Of course cold frames and hotbeds are not strictly necessary, but they are a great convenience and give earlier and better plants. The cold frame is particularly useful as a seed bed for perennials and biennials and as such is in use throughout the year. Its cycle begins in June when sweet-williams (Dianthus barbatus), foxgloves (Digitalis), and Canterbury bells (Campanula media) should be sown. These are, strictly speaking, biennials, which bloom the second year after seeding and should make good growth the first summer to ensure strong flowering plants the next. In July come all the perennials that are required for setting out in the autumn. Early planting means large enough plants to handle successfully in September, which is the proper fall-planting time; so order your perennial seeds in midwinter when you order your annuals and sow them before the middle of July.

If, however, you are saving your own home-grown perennial seeds, of course you cannot plant them before they ripen, so reserve space for them. Because they are home-grown and quite fresh they germinate promptly, grow fast, and soon overtake last year's seed from the nurseryman, so — except in the case of new things you are introducing to the garden — increase your supply by ripening your own seed. This should not be done hit or miss, but on a basis of careful selection. As each variety of

flower comes into bloom, decide whether or not you need more of it next year. Almost certainly you will want more delphiniums, so taking that as an example, we will follow its development.

Since no second flowering will come to the plants allowed to seed, it is best to save only a few stalks, but this will give an ample supply. In selecting these parent stalks notice color, healthfulness of the plant, height of stalk, and size of flower. No one of your seedlings will be exactly like its parent or closely resemble its brothers, but if the selection is well made you will have a fine, upstanding collection of all shades and forms. With delphiniums a special effort should be made to take seeds untouched by the wretched "black disease" so prevalent these past years. If the disease is in your garden but there stands in the midst of a group of infected plants one clean, healthy one, that is the plant to use for your seed supply. It is proving its comparative immunity by living so close to contagion and yet being clean. Its progeny will probably inherit this tendency to immunity, and by weeding from the seedlings any that show the congested, blackened look that the disease gives even to newly sprouted leaves, you will be reasonably sure of healthy and strong plants.

After choosing the three or four stalks, of different shades and from different plants, mark them carefully so that they will not be cut. In my garden I use pieces of red worsted tied in neat bows. As with Alice's Humpty-Dumpty, it cannot always be told whether the flowers are wearing neckties or sashes, but anyway they are noticeable and catch even the preoccupied eye.

If the season is cold and wet the seeds may be long in ripening. An ideal season is a little rain, much sunshine, and warm nights. As the days go by the pods grow shinier and fatter, then begin to turn yellow, and finally the bottom ones crack open at their tips. When this has happened and the seeds show brownish

black inside, cut the stalk about a foot below the seed pods, take it into the house and set it in water in a sunny window. There it will ripen until all the pods have popped open and the seeds are hard and black. Shake them out of their pods into a shallow dish or on to a piece of blotting paper and allow them to dry in the sun, and then plant them immediately. They will be up in ten days; in a month you will be thinning or transplanting them.

This same process may be followed with everything that sets seeds, but remember that hybrids rarely do it, and that colors cannot be counted upon to reproduce themselves or semidouble flowers to give semidouble descendants. If, as in the case of sweet-william Newport Pink, no other sweet-william is near, most of the seedlings will be pink but of varying shades. If old-fashioned red-and-white is near enough to establish communication by the bee-line, the crop will revert largely to the stronger parent, which is the ancestral red-and-white. Incidentally there is always the chance of some new hybrid of special beauty of form or color. This is one of the excitements of saving seed. It offers many rewards and is attended by few failures.

The seeds of particularly fine annuals can be ripened in exactly the same way but should not be planted until the following spring. Indeed, if you like the blooms in your first year's garden, enough seeds can be gathered each year to furnish a never-ending succession of flowers.

Many annuals and some perennials can be trusted to seed themselves. Columbines (Aquilegia) are particularly prolific and dozens of little plants will spring up among them if a few of the seed-pods are left undisturbed. Foxgloves prefer this method of reproduction. The seedlings of valerian and flax are weed-like in their persistency and quantity, and Thalictrum, forget-menots, Anchusa, and many others will germinate dropped seeds freely. The season of fine bloom in the garden is shortened by

this method, because while the strength of plants is concentrated in developing and ripening seeds there is no reserve left for sending up new growth, but it is a cheap and easy way to attain profusion of bloom over a short period. If you have a corner where a few of these complaisant plants could be put helter-skelter and left to themselves, it would prove a treasure-house each spring when disasters begin to show themselves. For no winter ever goes by without its toll of dead and dying plants, and a reserve of very easy, hardy, and dependable things will go a long way toward comforting the bereaved gardener.

The annuals whose seeds will lie dormant in the open ground through the winter and germinate in the spring are poppies, larkspur, cornflowers, calendulas, pansies, and so on. If the first and best blooms of all of these are allowed to seed themselves naturally they will give few later flowers, but if the dead flowers of the early season are picked as they begin to fade, thereby conserving the vigor of the plant, a summer of bloom will end with ripened seed-pods of August flowers. Annuals have a way of bursting into fresh and profuse bloom after the first late summer rains, and the fine flowers that come at this season will supply plenty of seeds for self-sowing unless an unusually early frost cuts them down. But a few of the very best blooms should be left to ripen for the main and dependable supply and be carefully gathered and preserved. Three or four zinnia flowers will be enough to supply the required number of plants, or one big lemon-colored African marigold. The number of seeds one flower produces is startling.

It is never worth while to sow inferior seeds. The returns will be small in both quantity and quality. It is important to remember this both in saving and in buying seeds, and as you save in small quantities you will realize how much work goes to harvesting flower seeds in large quantities and understand that good and clean seeds cannot be very cheap. "Of two packets of seeds of the same variety and quantity offered in a catalogue, buy the more expensive," does not seem like economical advice, but it is. The amount involved is a few cents and the probability is that the more expensive packet is of a newer and more floriferous type, more carefully tended while in flower to see that sports and wrong colors do not creep in, more carefully cleaned when harvested, and fresher because scarcer and therefore in demand.

It cannot be too often repeated that, in buying seeds or plants, the way to successful cheapness is to purchase few varieties and just enough of each variety, and to take such good care of each seed and each plant that it will reach its full development. But unless seeds and plants are good to begin with they cannot succeed. For each good thing there is a market price. The things which rise a little above this price, if they come from a reliable nursery, are probably a little above the average; the things that fall below it are apt to be left-overs or undesirables. Be judicious, not parsimonious, when you buy your seeds. "Few and good" is what makes for success in the little garden.

It is never worth while to use the hotbed for perennial seeds, but if you want early annuals they may be sown in it in rows or set in it in their seed-pans and boxes for quick forcing. It is for slow-growing vegetables, such as tomatoes, eggplants, green peppers, celery, cauliflower, and cabbages that it is most useful, in fact a real necessity. These should be started about two months before it is safe — in an average spring — to plant them out in the open ground. Radishes and lettuce will be ready to eat at the time they taste the best if started as soon as the hotbed is ready to receive them.

The important details for successful hotbed management are: a layer of thoroughly pulverized soil over the fresh manure and its covering soil; thinly sown seeds in drills or rows about four inches apart; and proper watering and airing. Without these last two the little plants will "damp off" and disappear. For a one-or two-sash hotbed always water with a large watering pot with a fine "rose" instead of with a hose. Do not use water drawn directly from the hydrant, which is very cold, but let it stand for a while in the sun or take it warmish from the kitchen sink. Once a day is often enough at the start and it is best done in the morning as the day is growing warmer rather than at night when sharp spring cold may be expected. Whenever the day is warm enough, which means a temperature of forty degrees or thereabouts, let in air by lifting the sash a little, the amount depending upon the temperature. Wedge-shaped blocks can be thrust under the sash to hold it up for an hour or all day. This is not necessary until the seeds germinate, but from the very beginning they must be watered daily and carefully.

No matter how thinly the seeds are sown, if they germinate properly the little plants will stand too close for their own good and must be thinned or transplanted to about three inches apart in the rows, the latter being the better method because it economizes both seed and room. In transplanting save about twice the number of plants you seem likely to need, to provide for unavoidable tragedies such as field mice, obscure diseases, and late frosts. It is impossible to have enough healthy seedlings without having too many, but if a careful planting-plan with its list of requirements is made, the waste of time and work can be cut to the minimum. There is always someone glad to take or trade the left-overs, so they are never really wasted. If these seedlings either before or after transplanting show signs of drawing up too tall and thin, nip them back mercilessly with thumb and forefinger just above the lowest set of leaves, whereupon side shoots will appear. In warm, sunny springs this often happens and a plant once spindly is always spindly.

The more ordinary flowers and vegetables can all be sown alike but some allowance must be made for the size of the seeds and the length of time they require to germinate and grow. The seed-bed, whether it is in the hotbed, cold frame, or open ground, must be well prepared by deep digging, raking, and a final sprinkling of sifted soil. In this, mark off drills or lines three or four inches apart and scatter the seeds thinly along them. Press the seeds into the soft soil beneath them with a block of wood or something with a flat surface and sprinkle or sift over them a little of the pulverized soil. The seeds should be covered by this last layer; therefore, if they are comparatively large like hollyhocks, they will require a thicker coating than if they are very tiny like forget-me-nots. Very diminutive seeds are more easily handled if they are mixed with about twice their bulk of fine dry sand. This scatters them more evenly and thinly. Last of all, press down the soil again, sprinkle very gently, and await results, not too passively, for without daily watering and careful weeding seedlings will not thrive. Only be sure that it is the weeds you are pulling, not the seedlings, and that the watering is not so vigorous that the seeds trickle away in its running streams or the little plants are bowed to earth by the heavy drops that fall upon them.

From mid-June to mid-September is the best time to seed perennials or biennials. Such slow-growing annuals as snapdragons (Antirrhinum), phlox drummondi, or petunias should be sown by the first of March. Zinnias, cosmos, and African marigolds will be just right for setting out if they are sown about April 1, and May 1 is early enough for asters, calendulas, cornflowers, and annual larkspur. These last may quite well be sown in the open ground, except that it requires more seed than when they are sown in pots or flats. This does not, of course, exhaust the list of desirable annuals but it gives a key to their varying requirements.

If hotbeds or cold frames are out of the question, it is fairly satisfactory to give the seeds their first start in the house. The shallower six- or eight-inch flower-pots, usually called bulbpans, make excellent seed-pans and give room for about the same amount of seed as two feet of drill. Begin with a layer of gravel, broken pots, or bits of brick, and fill them with the sort of soil before described. Scatter the seed, press it down, and cover it exactly as you would out of doors; but the pots have the advantage over outdoor sowing in that they can be watered from beneath by being allowed to stand in water until it is drawn up through the soil instead of sinking down into the soil. Set them on a window sill or in a glass-enclosed porch and take care of them as described. They will need a little more frequent watering because the small amount of soil in the pots will dry out sooner than in a seed-bed. Sheets of glass set over the pots and raised just enough to allow a circulation of air will hasten germination, and when the seedlings appear, the pots should be turned frequently to avoid drawing up by the light that comes from one side instead of evenly from above. When large enough. the quantity of little plants required can be transplanted into shallow wooden boxes called flats and easily made at home.

Special care will have to be taken to keep these house-grown plants stocky and vigorous. Nip them off when they begin to grow leggy and water them as long as possible from beneath. They are pleasant and easy to work with and save the knees and the back, but do not undertake too many varieties or your house will be overfull before the spring weather is certain enough to permit them to be moved safely to the garden.

VIII

GARDEN GENERALITIES

The beginning gardener is almost sure to set out plants too close together. He plants three hollyhocks where one would make a braver show because, uncrowded, it would have a chance to develop. By the same token he sows seed too thickly and thins out too grudgingly. Overcrowded plants are always unhealthy plants, undernourished from beneath and from above, therefore a crowded garden is a wasteful garden and an unsuccessful one. Seedlings and new perennials may be planted more closely the first year than they are to remain, but only as a temporary measure and to provide for the possible — alas, probable — failure of some of the plants.

Setting plants far apart does not mean expanses of bare earth. It means healthy and bushy development, large flowers, and lots of them. Annuals, which live out their lives in a few months, can be crowded more than perennials, whose life under proper conditions extends over many summers. It is difficult to give any exact rule but generally speaking the more permanent a plant is the more space it requires. Peonies, for instance, that may be left undisturbed for twenty years, should never be planted less than two feet and a half or three feet apart. For the first year or two there will be gaps between them, but, for the peony, transplanting is a major operation and a shifted position means little or no bloom for two years. Aconite, gypsophila, hardy pinks, Japanese anemones, also resent uprooting. They may look lonesome and unfriendly for a year or two if properly spaced, but in the end they will enter into all sorts of entangling alliances and in their blooming season they will flourish as one plant.

Phlox, delphinium, iris, and all plants that are best divided

every few years will do well about eighteen inches apart, and seedling delphiniums, with a view to transplanting every other one at the end of the first summer, will be fairly contented with ten inches or a foot between them. Edging plants which are meant to meet and combine and have space to spread sideways may be rather crowded in the row, the more spreading ones being allowed ten or twelve inches, the compacter ones six. Biennials may be planted out rather closely, since their one burst of bloom in the second year is their last. For this reason they should be sparingly used in the little garden.

Though annuals will survive crowding, they will not reach their best development. In the small garden where general effect rather than specimen blooms is desirable this does not perhaps matter, but to plant them too closely is a sheer waste of material. Large-flowering zinnias are quite capable of covering a circumference of eighteen inches and African marigolds will assume the proportions of small shrubs if given a chance. All annuals look small and incapable when first set out, but the trusting gardener who dots them over an expanse of well-dug earth will have more to show for less effort when blooming time comes than he who grew and set out serried ranks of baby plants.

Even though you sow seeds broadcast and thinly and mix the tiny ones with sand, more seedlings will come up than can grow comfortably and quantities must be ruthlessly pulled up. Thinning is one of the hardest lessons the amateur gardener has to learn; it seems a murderous thing to do; but if you recall the numbers of seeds that nature produces and wastes you will feel more comfortable and certainly grow better flowers.

The depth at which plants should be set is decided by the sort of roots they have. The more permanent plants have long thrusting roots which go deep for their moisture and food. Large deep holes should be dug for these, deep enough to hold them naturally without crowding or twisting. The crowns — the point at which upward growth starts — of all plants with long fleshy roots should be well below the surface of the soil, two or three inches to start with, because the newly dug earth will settle in around them.

Fibrous-rooted plants require shallow planting, just a depression into which they are set, and soil sifted in around and over them, topped off with a few good thrusts of the gardener's thumbs.

Plants whose roots grow in a sort of tassel at the base of the leaves must have holes large enough to spread the tassel out and down, with the crown just below the surface of the earth.

The essentials in every case are to spread, not crowd, the roots, to press the soil firmly and evenly under, around, and over them, and to give plenty of water immediately after planting.

The best season for planting is a debatable question. For replanting established but divided perennials early autumn is unquestionably best. They will send out new roots before frost sets in and be ready to begin upward growth in the spring. Well-grown perennial seedlings can also be planted in early autumn, but small seedlings will winter better in the cold frame or a protected seed-bed. Many annuals can be seeded in the autumn and will lie dormant through the winter and sprout during the first warm spring days. Spring-flowering bulbs must be planted in the autumn. On the other hand, very late-blooming perennials such as hardy chrysanthemums and Japanese anemones must be planted in the spring.

It is not possible to get plants shipped from nurseries in the very early autumn, so some sorts that are quite safely moved from one place to another in the garden in the fall would be better left until spring if they are to come from a distance.

There are two kinds of winters that are hard on plants; the

very cold winter that sets in early and continues severe throughout, and the winter that is sunshiny and varying in temperature so that the surface of the ground continually freezes and thaws. If you live where either of these conditions prevails, it is a safe rule to transplant within the garden in the autumn but to plant newly bought nursery stock in the spring.

As a matter of fact, plants can be moved from one part of the garden to another at almost any time, but if growth is well started it must be done quickly, in the early morning or late afternoon or on a damp cloudy day, and quantities of water must be used. Begin by digging the hole in the new spot and filling it with water. Then dig up the plant to be moved with as much soil as possible around its roots and plump it quickly into the muddy little lake that is waiting for it. Fill in the soil, water some more, and unless it rains persistently for days, keep on watering, morning and night, until the plant has had a chance to recover itself. Sometimes this is well worth trying even with blooming plants, when accident or neglect makes bare a conspicuous garden-spot.

The division of perennials is one of the most interesting details of gardening and gives tangible proof of success. That one plant has grown and prospered under your care until it can be made into six plants gives a personal satisfaction which is not perhaps quite justified, but is always enjoyable.

The fact that you have arrived at the point of dividing plants proves that you are no longer a very new gardener, so you will know how to handle them and recognize the various sorts of roots. The easiest kind to manage are such things as phlox, Michælmas daisies, or delphiniums. These can be simply cut or even pulled apart and the pieces replanted. If you require a quantity of new plants they can be divided stalk by stalk, taking care that each bit has a number of uninjured roots. If you re-

quire only a few new plants and want good bloom the following summer, cut the lifted plant into four pieces with the edge of the spade or a large, sharp knife.

Shallow-rooted creeping plants can be torn apart with very little care and stuck into the ground in sod-like pieces. They seem to enjoy the process.

Primulas, heuchera, and all plants that have a rosette-like form will be seen to be made up of a number of smaller rosettes. These can be separated from the parent plant and will respond gratefully to the independence conferred upon them. The rosettes cannot be torn away entirely rootless and must, like all of the others, be given a great deal of water to start with.

Many plants increase their circumference by sending up side shoots, that can be broken away just below the surface of the soil without disturbing the main clump. Sometimes bits of root will come away with them and if not, the offsets can easily be rooted in moist sand and transplanted later to permanent places. Indeed, if your supply is increased by this method, it is advisable to keep these rather tender plantlets in a very comfortable and convenient place where they may be given lots of water and shaded if the weather is too hot and sunny. It is a practical way of increasing the supply of Japanese anemones, delphiniums, and bleedinghearts, but unless some plant is very desirable in color and form, other methods are simpler.

The plants that require the most skill to divide successfully are those with fleshy roots meeting at a crown where buds or eyes for the following year's flowers sprout after the plant has bloomed. The division of peonies has already been mentioned and into this category also fall bleedinghearts, gypsophila, and others. These must be cut apart very carefully, being sure that each section of root has an eye or two, which in planting must always be set pointing upward.

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Another way of increasing the supply of plants not readily raised from seed is by the process called "layering." In roses and other plants with long, runner-like roots this frequently takes place naturally and shoots will appear at some distance from the parent plant, which can be taken up and planted as independent subjects. It also happens that branching plants whose runners lie close to the ground will put down roots and thrive independently. In this class are Nepeta mussini and Dianthus plumarius, and little new plants can easily be formed by pegging the runners to the earth at the joint-like places where tufts of leaves grow upward. An invisible hairpin is the very best peg to use. It is easily thrust into the ground and will hold the stem securely while the roots are sprouting. If the season is dry frequent watering will be necessary, but in a few weeks' time a whole circle of little plants will be growing and thriving around the central big one, the stem which attaches them to it can be cut, and the new supply is ready to be transplanted.

Hollyhocks, anchusas, and all other plants that send down long roots from a central, trunk-like neck cannot be divided any more than could a tree by cutting its trunk into quarters, but all such plants seed and germinate freely so their increase is provided for.

Oriental poppies, like dandelions, grow from bits of root stuck into the ground and are almost as hard to get rid of as dandelions. Some of the salmon and white and very dark red varieties are beautiful, and the ordinary bright red ones are fine at a distance in a big garden, but they are too greedy and leave too bare a place after they have finished blooming to be desirable for the small garden.

Irises are in a class by themselves and methods of division have already been described.

It is always a safe rule to divide plants immediately after their

season of bloom, but if this is inconvenient it can be left until after the first frost. When digging them up always cut back the tops to five or six inches of stalk, and after they are transplanted always give plenty of water.

That seeds should sprout, brown filaments send up shoots, and flowers bloom, is increasingly mysterious. The gardener's bewilderment grows with his experience. He is humbled when he sees how little he does to help and how much happens without his assistance. The things he can do are simple and natural, and common-sense is as much a part of good gardening as it is of good housekeeping. Well-prepared soil, water, intelligent handling and space for growth both above and below ground are the modest demands of his flowers. It is their nature to grow and they are not easily thwarted. Each variety may prefer certain conditions and treatment, but generally speaking, the rules are few and simple.

In England they have an engaging way of personifying all flowers: "I had him in that dry corner," they will say, "but he did n't fancy it. Look at him now with his feet in the water. He's got just what he likes." If you feel that way and treat your plants that way, you have the secret; but be practical before you let yourself get sentimental, and seed, weed, plant, and cultivate conservatively and painstakingly. Garden success is uncertain as the sun and rain are uncertain, but failure is assured if the little things are neglected. It is true perhaps, as we are often told, that some people can put a stick in the ground and it will grow, but I feel sure that such people choose their stick very carefully and show it every attention throughout its career. It was predisposed to grow and seized its chance when it came, but its spectacular career gives proof of unassuming and unremitting labor and care.

NECESSARY AND UNINTERESTING GARDEN DETAILS

It would be pleasant if after the little plants are safely set out or have begun to show themselves above ground they could be left to themselves, but like children they demand a great deal of care while they are growing if they are to develop into fine upstanding specimens. If this attention begins early enough, a few minutes a day will be enough at the start and hours can be cut from the harder labor of their later life.

One most important detail is proper labeling. You will reach the stage, in time, when first leaves pricking through the soil are recognizable, but before that stage is reached you will also recognize the value of markers, the time they save and the comfort they give. Their first use is to mark the rows of seeds and the pots or boxes in which seeds are planted. For this purpose the little white wood four-inch labels are sufficient, but on them should be written the variety, color, and date of planting. The most satisfactory method is to use two of these labels, one to cover the writing on the other and keep it clean and bright through all the various operations of watering, weeding, and weather.

Eight-inch wooden labels are better for marking plants, bulbs, and even seeds planted in the open beds. Smaller ones are too inconspicuous and will surely disappear during cultivation or be forked in or out with the winter covering. Always use these double. They are readable for years if set close together, with the writing inside, so that rain and mud cannot get between them.

For marking the permanent plants whose variety it is interest-

ing to know, such as peonies, irises, roses, and such shrubs as lilacs and Philadelphus, which now have so many beautiful new hybrids, more permanent zinc labels should be used. These can be bought but it is more satisfactory to have them made at the tinsmith's, having them cut the size and shape you prefer. A good size is about $3 \times 1\frac{1}{2}$ inches, with a hole at one end, for copper wire, by means of which they can be fastened to galvanized wire stakes and stuck deeply and firmly into the ground, so that no fork or spade will disturb them, close to the roots of the plant they mark. A fluid is manufactured for marking zinc labels but indelible ink applied with a sharpened stick instead of a pen is quite satisfactory and will last for years. The original cost of such labels is an item but in the end they are cheap and you and your garden visitors will find in them pleasure and profit.

For bulbs and perennials, which quite disappear after they have bloomed, some sort of marker is essential, not so much to tell what they are as where they are. Otherwise the spring uncovering and cultivating will claim many a victim and temporary annuals will be required to fill the spots where permanent perennials once grew. This is expensive in three ways: the original plants are wasted after purchase and a year or two of care; extra annuals must be grown to provide for contingencies; and time must be spent in setting them out; so count yourself a bad gardener until you have learned to label conscientiously and thoroughly. It is one of the mechanical details of gardening that the newcomer undervalues but that the old-timer never neglects.

As measles to the child are aphides and other sucking and chewing creatures to little plants. A very few remedies, promptly and vigorously used, will hold these in check. Aphides and all sucking creatures appear in their thousands on the new growth and under side of foliage. They must come directly in contact

with whatever insecticide is used, because they feed upon the juices of the plants, not upon its surface. A sort of tobacco tea is effective and easily made by steeping tobacco stems or cheap, strong pipe-tobacco in water. Apply it with a small hand sprayer, which is a little-garden necessity, and be sure that every part of the stems and foliage is reached. One application may not be enough, so keep some sort of tobacco solution always on hand and use it conscientiously.

Chewing insects that actually eat the plant may be reached by applying poison to the plant, and as an all-around poison Paris green is the best. One ounce dissolved in ten gallons of water is a strong enough solution and will last through an ordinary summer. Apply it with the hand sprayer in the evening or early morning.

Ants are a persistent nuisance but their hills may be destroyed with boiling water. The plant in whose roots they are nesting will probably be destroyed too, and if it is a very choice one, carbon bisulphide can be used. This is inflammable, so must be handled carefully. Make small holes in the soil deep enough to undermine the ant hill, pour in about a tablespoonful of the liquid, and quickly seal the entrance to the hole with soil trodden down. This is effective with borers in shrubs and fruit trees too, but in that case the carbon bisulphide must be thrust, on a piece of cotton, into the hole which the borer has made and be sealed in with wax or — a suggestion which it grieves me to make — chewing-gum. This method of attack may also be used upon cutworms but they work while you sleep and the damage is done before you know they are there.

Fungus diseases, such as mildew and scale, frequently attack plants and these can be held in check with flowers of sulphur dusted on dry from an ordinary tin pepper-shaker. If this is not effective, Bordeaux mixture, used according to directions on its can, should be tried.

Rose bugs, aster beetles, and their like are difficult to cope with. The usual method of getting rid of them, which is slow and disagreeable, is to pick them off the plants they are destroying and drown them in a pail of kerosene. In recent years a preparation called "Melrosine" has been found by many to be effective.

In every seed catalogue is listed a page of insecticides, most of which are good, but they are all variants of these simple remedies. The thing to keep in mind is the treatment required to get rid of each type of bug and to use immediately the most convenient remedy of the sort needed. At the beginning of the difficulty a very little will go a long way, but plant-destroying creatures work fast and increase faster, and unless you take prompt measures they come off victorious.

These suggestions are for the flower garden only. If scale or insects attack your trees, it is better to seek special advice and have them promptly treated by someone with experience or to treat them yourself under proper guidance. You can afford to experiment upon small and short-lived plants, but trees are too useful and slow-growing to lose through neglect or ignorance.

There are plant diseases that cannot be treated successfully, such as stem-borers and various sorts of blight. When these attack a plant, pull it up and burn it immediately. Do not risk infection of its neighbors by leaving it in the garden or on the rubbish heap. It is always a good plan to burn the tops of any plants that have been diseased in any way during the summer. The dormant scale or blight may appear the next year even though it seems to have been conquered.

Unfortunately special plants have their special diseases, but when these appear more detailed study will be needed. Try the ordinary remedies first and if they are unsuccessful, make it your business to find out from some available authority what special treatment has proved beneficial.

In a small garden every bit of soil is used every summer and all summer, so that plant nourishment is quickly exhausted. This makes necessary a certain amount of fertilizing each year. All plants require phosphoric acid, potash, and nitrogen. For ordinary little-garden purposes, bone meal may be said to supply the first, wood ashes the second, and well-rotted manure or compost the third. Bone meal results in fine flowers, wood ashes improve the wood or stem and fruit or seed-pod, and the application of manure gives luxuriant growth to leaf and branch. This is a very general statement but it is easy to remember, and if it is borne in mind and little plants are given a balanced diet of all three at some time during the summer, there will always be reserve food for them to draw upon and no one of their functions will be starved by the undue development of the others. For annuals the best plan is to spade or fork in the fertilizers just before they are set out; perennials appreciate an application of bone meal and wood ashes just as the buds are beginning to form and another when the first crop of flowers is gone. We are in the habit of using strawy manure as winter covering and forking it in in the spring. This is a rather wasteful method, as much nitrogen is slaked out during the winter. Use strawy manure as covering if you can get it cheap, but for a square meal give the plants decayed vegetable matter in the spring. This is the time when the garbage that has been rotting down in its pit and the leaves, grass-cuttings, and last year's flower-stalks prove their value and reward you for your economy and trouble. As an extra stimulant for some plant that you are anxious to be especially proud of, a little sheep-manure is excellent, and chicken manure is a very high-power fertilizer to use in small quantities.

Bone meal may be scattered evenly over the ground so as to show a coating of white; wood ashes should be sparingly used in about half the quantity of bone meal. A good mixture for permanent plants is a trowelful of bone meal, about half that amount of wood ashes, and twice as much sheep-manure or well-rotted cow-manure. Dig it in all around the plant, in a circle.

An easy way to apply manure is in liquid form, and an easy way to prepare it is in a barrel, painted inside and out, with a spigot at the bottom edge. Put cow- or sheep-manure into an old sack and place it in the barrel, about half a bushel to the full barrel of water. This can be diluted with half again the volume of water, when it is applied close around the roots of the plants it is designed to nourish.

But more than anything else counts cultivation. Food, water and insecticides will be wasted without it. Plant roots, particularly those that forage for food and moisture, are very tiny and cannot make their way successfully through tightly packed soil. Incidentally the sun draws moisture more easily from unbroken than from pulverized soil, so there are two reasons why flower beds should be constantly stirred. A third reason is that raking disturbs the weed seeds and gives them no chance to grow, thus saving precious hours and recurrent backaches. The time to cultivate is as soon after a rain as the soil is workable or, in time of drought, after a good sprinkling. If this rule is kept, half as much sprinkling and occasional showers will keep the garden fresh and blooming. A little fork with bent prongs and a long handle is the best tool for cultivating, and if you use it faithfully after each hard shower or once a week between showers, you will not need to resort to the hoe or rake. By scratching the surface of the soil you break it up and keep it friable.

It is a dreadful thing to let weeds flourish in your garden. They are hungry and thirsty things that devour all the food you have intended for the flowers, suck up all the moisture, and generally undermine your most painstaking efforts. They are the grossest extravagance of the lazy gardener and without excuse in the

small garden, where a few moments expended at the right time would make them impossible. Proper and adequate cultivation is all that they need to banish them and their disappearance is a by-product of an otherwise necessary process, a process which as time-saver, money-saver, and result-getter is more important than any other detail of gardening.

For the amateur nothing is more difficult than staking. Plants bunched around a single bamboo pole are ugly and plants prone on the ground unsatisfactory. Each sort has its proper method, but it means a tedious job and one that assumes vast proportions unless done at the proper moment. Hollyhocks, dahlias, anchusas, and those plants that branch from one single trunk-like stem are comparatively easy. A stout stake, stained green and at least four feet long above the ground, is planted firmly beside them and they are tied to it at intervals with raffia or binding twine. For such branching plants as delphinium, either each stalk must be tied with a loop of string to a central stake, or a wire loop, supported by three legs which are set in the ground, is placed over it. This should be done, with all leafy plants that send up several flowering stalks, while they are small, so that the foliage may grow over and around the support and finally conceal it. If these rings are made of galvanized wire they may remain over the plant in winter, marking its place and ready for the next summer. These wires are the best peony-supports.

An English method of staking bushy plants is with brush, over which they grow and which keeps them from being beaten down by rains, or blown apart from the centre. This has been tried with success, but the brush must be tall and strong enough to give real support and must be put in place while the plant is small.

The stakes most generally used are small bamboo poles, which come in various lengths and should be stained green. They can

be cut to the length required but always be sure that they are firmly planted and that the twine which ties the plant to them has a loose enough loop to allow the stem of the plant to grow and expand. These bamboo stakes, if put carefully away in bundles, will last for several seasons.

The necessary point in staking, as in so many other garden processes, is to do it at the proper time before the plants are too large and have sprawled too much. Nothing is uglier than a compact mass of bloom girded to an uncompromising stick. But if the supports are planted early enough in the plant's life, it will grow around or through them in such a way that they are quite unnoticeable. A little observation on the part of the gardener will teach the habit of growth of each sort of plant and the time it is most easily managed. The beauty of a garden depends much on this one thing, though little credit is given to the discriminating gardener who has learned how to do it. Like so many things, it looks easy when it is well done. But learn how to do it well, both for your own glory and that of your plants.

The least interesting of necessary details is keeping the plants tidy, cutting off their faded blooms and brown leaves, removing straggling branches, and generally grooming them. But if last week's flowers are withering beside this week's buds the effect cannot be good. It is apparently impossible to hire anyone who does not consider himself above clipping dead flowers. It is distinctly the job of the lady of the house. She alone sinks to the necessary level of imbecility. But you who are your own gardener should glory in the humble task that takes no brains and very little physical effort and is so important to the general effect. I am forced to admit that seventeen years of it in a comparatively large garden has reduced me to a monomaniac, but at the same time convinced me that it is worth doing thoroughly.

All these processes require paraphernalia in the way of tools

and materials, and very important is a place to keep them. Mr. Fletcher Steele in his book, Design in the Little Garden, describes a shallow toolhouse built against a wall and very inexpensively constructed with a shelf, hooks upon which to hang tools, and floor space deep enough to set pails, lawn-mower, hose, and so on. If you have no place or means for even so simple a structure, at least set aside some corner of the cellar or garage or drying-yard in which all your garden material is gathered together. Return things to this spot each time you have finished using them and your life and theirs will be lengthened. There is nothing more annoying or time-consuming than to have to search for the thing you want next, and a missing garden-tool will undermine the kindliest disposition and break up almost any household.

The list of garden requirements is a fairly long one but it can be shortened by getting the right thing - not the thing you feel you may possibly want or the thing that beguiles you with its trickiness. A list of necessities follows, but it is suggested that the more expensive articles, such as a lawn-mower, wheelbarrow, and possibly a hose might be owned and used by two or three neighbors jointly. Probably all would want to use each at the same moment, but a satisfactory schedule might be worked out. If you have a fairly large vegetable-garden, a wheel hoe is useful and saves time, but there is little use for it in a flower garden.

Hose — fifty or one hundred feet, depending on extent of property Patent sprinkler Wheelbarrow Pruning shears Spade Rake Spading fork Small weeding-fork

Hoe

Trowels — one large, the other small and narrow Line Pneumatic sprayer Watering-pot-4 to 6 quarts with a coarse and a fine rose Powder-gun or pierced canister Labels Stakes Raffia and binding twine

Every child who has gardening tools, Should learn by heart these gardening rules:

He who owns a gardening spade, Should be able to dig the depth of its blade.

He who owns a gardening hoe, Must be sure how he means his strokes to go.

But he who owns a gardening fork, May make it do all the other tools' work,

Though to shift, or to pot, or annex what you can, A trowel's the tool for child, woman, or man.

'Twas a bird that sits in the medlar tree, Who sang these gardening saws to me.1

Last process of all is covering the garden for the winter, and to do so successfully is none too easy. To begin with, nothing should be covered at all until the ground is thoroughly frozen, which occurs at varying dates. In addition, what is a suitable and acceptable winter blanket for one sort of plant is death to another. And finally, in certain damp but not very cold winters the usual amount of covering destroys what it seeks to protect.

One thing to remember is that perennials which remain green through most of the winter — such as Sweet-william or campanula—require little protection. Leaves or straw around and under their foliage to prevent the sun from thawing the surface of the ground is all that they need. This is true with most hardy plants.

Another important detail is to avoid manure around any perennial which does not entirely disappear during the winter months, and many others that do. Strawy manure is good winter protection for bulbs or such woody plants as phloxes, but never use it for peonies, irises, columbines, delphiniums, or hardy pinks unless it is thoroughly slaked out and almost all straw.

If your climate is a sunny one, the first spring days are more dangerous to your plants than the coldest winter, so never uncover until fairly warm weather has come to stay. This is especially true of rose canes which have been tied up in straw or covered with burlap during the cold weather. Strawy manure is safe and useful around their roots.

Evergreen boughs are the ideal covering for rock gardens and all plants that grow close to the ground. They shade and protect without excluding the air, but in the small garden they are not easy to get and brush with leaves scattered among it is a good substitute.

Marsh hay is another good covering which does not rot down or get soggy; but the ideal protection is leaves. Autumn fires fill the air with savory smoke but no true gardener can enjoy it. The waste is terrible, for not only is the garden's protecting blanket being destroyed but quantities of good nourishment are going up in smoke. So rake up your leaves and store them carefully until the ground is really frozen, then scatter them around and over your most cherished plants and in the spring fork them into the soil.

Experience teaches that more plants are killed by too much covering than by too little. If you will remember that in a temperate climate no covering must be done until the ground is well frozen, that manure must not touch persistent green tops, that soggy covering which mats and excludes the air will smother what is beneath it, and that exposure to hot spring sunshine followed by chilly nights will burn where the winter has not frozen. a successful plan may be worked out for putting the garden to bed. Almost all hardy plants must be well frozen if they are to flourish in the following summer, and whatever covering is done is to keep them uniformly cold rather than comfortably warm.

If a blanket of snow six or eight inches deep would fall in December and melt gradually in early March, the covering problem would be happily solved. All other protection is a makeshift. Keep this in mind when you and your garden are preparing for your winter rest.

PLANTS FOR THE LITTLE GARDEN FOR LITTLE MONEY

EVERY locality has its peculiarities of climate and soil which the wise and successful gardener studies and comes to know. But in the process of learning much money and time are lost.

The problem is a particularly difficult one in the United States, for, although the individual gardener must specialize, the catalogues must offer plants for every climate and the books and magazines information that is too general for the inexperienced. There are as many gradations between Minnesota and Florida as there are degrees of latitude, and the variations between Maine and California are further complicated by altitudes and inland seas. No practical gardener can be wise enough, nor could he take the time, to know all that will grow in each corner of our country; but there are certain things that flourish almost everywhere, liking better, perhaps, one spot than they do another, but pleasantly and beautifully adaptable to a wide range of soils and conditions.

The lists that follow include most of these plants. They give nothing that will not grow with reasonable preparation and care in a temperate climate with normal soil-conditions; they give nothing that demands certain conditions of heat, cold, drought, or moisture. They are short lists of things that you can grow, and there is more than enough included to give a beautiful garden from the last to the first frost. They are based on garden experience in the Middle West where a lime soil makes ericaceous plants and the broad-leaved evergreens next to impossible, but agrees well with the ordinary range of plant-material. Season of bloom is given for that district and might vary ten days or two

weeks one way or the other. Observation and natural general knowledge of your own climate will tell you what allowances to make. No hard-and-fast rule can be made in this connection, but the combinations will work out, whether in May or in June.

Alas, gardening is the most inexact of all the sciences and a sun spot can ruin your summer, so these lists that are offered as "fool-proof" may in some years strike you as being very foolish. They are purposely and necessarily brief, and there are repetitions. The cultural directions are also based on experience with a certain respect to time-honored precedent, to which every gardener bows. Prices (1923) are based on a comparison of the best-known nursery catalogues, and are approximate.

PLANTS SUITABLE TO A SMALL AND INEXPENSIVE GARDEN, WHERE ORIGINAL COST, UPKEEP AND TIME-SAVING DEMAND CAREFUL CONSIDERATION

Perennials and Biennials

Aconitum napellus (Monkshood) - A blue and bluish white flower which blooms in late June. Not one of the garden stand-bys but gives a pleasant variety when not many plants are in bloom. Its foliage is a glossy green and the sprays of moderately large flowers

grow three or four feet tall. Can be grown from seed.

A. Sparks Variety—A very fine hybrid variety with almost vine-like sprays of very dark blue flowers, sometimes six or seven feet tall. It begins to blossom in late June and blooms for a very long period. The sprays are carried above the foliage, which is dark and glossy. Exceedingly handsome and useful in a wide border. Being a hybrid, it cannot be raised from seed. Plants are not easy to obtain but some nurseries have them for about \$3.50 a dozen. Six is a

sufficient quantity for a small garden.

Anchusa italica - A blue perennial whose only disadvantage is its ragged appearance after it has finished blooming. This should be considered in choosing a place to plant it. It grows about three feet tall and has spires of intense blue flowers in June. Its stout stalks require staking as they are heavy and brittle. There are two improvements on the type: Dropmore Variety and the Opal. To be sure of these, plants must be purchased, but a packet of seed will give more plants than can be used in a small garden. many of them with flowers as large and of the same shade of blue as the named varieties. Plants will seed themselves if allowed to go to seed but they are ugly and will crowd out other things while doing so. It is preferable to save seeds from one especially fine plant. Do not give too much winter protection, as the plants rot in the centre. It is best to keep a small reserve supply in the seed bed in case all those in the borders disappear. In a very small garden this plant is too coarse to use but for wide informal borders it is very fine.

A. myosotidiflora (forget-me-not-flowered) The brightest and clearest of blue flowers. Grows about a foot tall and is beautiful in rock gardens. Seed does not seem to be offered, but once established it will seed itself almost too freely. It is not a good plant for formal positions but fine in occasional clumps. It is expensive to buy

but a stock can be worked up from a few plants.

Anemone japonica (Japanese windflower) One of the most beautiful of the perennials but not very hardy in cold climates. The colors are pink and white and there are double and single forms, both very beautiful. Alba, the single white variety, is the prettiest and most graceful. Queen Charlotte is a good semidouble pink and Whirlwind the corresponding white. It begins to bloom in August or September, continuing until a hard frost. It has good foliage which grows rapidly after it appears above ground, so is an excellent plant for any bed or border. The flowers are carried on long stiff stems well above the clump of foliage. It is difficult to establish and is best planted as pot-grown plants in the spring, since its late season of bloom makes it impossible to plant with success in the fall. In uncovering and cultivating the garden in the early spring great caution should be taken not to stir the soil around Japanese anemones. The shoots appear above ground very late from buds set during the winter, and if these are broken off the plant is destroyed. It is wise to mark very exactly with a noticeable label the location of each plant. It cannot be grown from seed. Plants cost about \$2.50 a dozen.

Aquilegia (Columbine) Indispensable in any garden. Long-spurred hybrids are the best form and may be grown from seed in mixed or separate colors. Seed germinates freely and easily and when established the plants will ripen all that is needed. Their blooming season is from late May through June and their foliage delightful throughout the season unless too many seedpods are left to ripen. Height about eighteen inches. They are more suitable in informal than in formal planting and are beautiful as a cut flower. They

are hardy and do not like much winter covering.

A. canadensis, the native red- and-yellow variety, is a fine plant for wild gardens and seeds itself freely.

A. cærulea, the blue Rocky Mountain columbine, is beautiful in color and form and should be grown from seed.

A. nivea grandiflora is a fine white variety.

A. chrysantha is a tall yellow species, later than other varieties and with a long season of bloom. Fine for borders or wild gardens.

All columbines are beautiful and suitable in rock gardens, where

they should be allowed to seed themselves.

Artemisia lactiflora — a handsome greenish-white flowered plant that blooms in August and September. Its dark green cut foliage looks well all summer and the branches of tiny flowers three or four feet tall are fine in the background of a border. It is a useful plant because it blooms at a season when there are few tall and massive perennials and because good white-and-green plants are always effective. It is easily grown and very hardy but cannot be raised from seed. Plants cost about \$2.50 a dozen. Six are enough for a small garden.

Hardy Asters (Michælmas daisies) Aster novi belgii, Climax, is a beautiful mauve with very large flowers. It blooms in August and September and is a fine background plant. Its rather weedy foliage makes it unsuitable for a narrow border or very small garden because it is attractive only when in bloom. Cannot be grown from seed, being a hybrid. Plants cost about \$2.50 a dozen.

Campanula media (Canterbury bells) the best known of the cam-panulas. Since they are biennials, they must be planted one spring to bloom in the early summer of the next year. It is important that they make good plants and be given adequate winter protection their first year or they will bloom unsatisfactorily. They are not good plants for the main borders of the small garden, for their period of bloom is comparatively short and ends too late to replace them satisfactorily. Their colors are pink, white, and blue. They can be easily raised from seed. Require careful staking.

C. calycanthema media (cup-and-saucer) are Canterbury bells with a frill at the base of the flower, which accounts for their

popular name.

C. persicifolia, a very pretty, delicate lavender-blue or white flower which does well when established and blooms through most of June and July. About eighteen inches tall. Very pretty in the border. Easily raised from seed.

C. carpatica (Carpathian bluebell) is beautiful for edgings and rock gardens. Blue or white flowers in late June and July and attractive shiny-green foliage throughout the summer. Difficult

to raise from seed.

C. lactiflora and C. glomerata are effective in informal plantings.

Hardy Chrysanthemums — Many beautiful varieties have lately been introduced and the choice of plants should depend largely upon climatic conditions. In Northern gardens the very earliest sorts must be chosen or frost will come before they bloom. They are not suitable for a small garden as they take up room and are inconspicuous during the summer, but are beautiful both growing and as a cut flower in the very late fall, if some sheltered corner is available for them.

Cerastium tomentosum (Snow-in-summer) A very pretty and useful gray-leaved edging plant covered with small white flowers in June. Very hardy and easily grown from seed, but after it becomes established almost too rampant a grower and must be rooted up and cut back constantly. New plants may be had by layering (see p. 74). Fine in steps, rock gardens, and walls. The foliage is good throughout the summer. It is very hardy and requires no

winter covering.

Clematis — Clematis recta is a beautiful border-plant which blooms in June and July. The starry white flowers grow in clusters and cover the plant with bloom. The foliage is handsome all summer, the green leaves having reddish tips. It must be staked with brush very early as it has not forgotten it was once a creeper. A single plant will develop into a large clump. Cannot be raised from seed. Plants cost about 35 cents each, and two to balance each other are enough for a small garden.

Dianthus barbatus (Sweet-william) Very desirable in the formal garden or border because of its mass of color. Blooms at a time when a flower of its height (about fourteen inches) and form is needed. Blooms throughout June and foliage remains green through the summer. D. Newport Pink is a good salmon-pink and the most effective of the variety. There are good reds and whites. Easily grown from seed but does not always come through the winter

well, so keep a reserve supply.

Dianthus (Hardy Pink) The ordinary hardy pinks may be raised from seed and are splendid edging plants, covered with small blooms in June and with good gray foliage throughout the summer.

A good strain may be purchased from any reliable seedsman and a large supply raised with little trouble.

D. Mrs. Sinkins is a fine double white of which seeds are offered, but it is safer to buy plants, which cost about \$2.50 a dozen.

D. White Reserve is another good double white, blooming between

the spring perennials and the first annuals.

D. deltoides (Maiden pink) is a charming bright pink tiny flower, beautiful for rock gardens or edging. Easily grown from seed and a very vigorous grower. It is a mass of vivid pink in June and has good green foliage through the entire season. A most

useful plant. Requires no winter covering.

Delphinium (Larkspur) The most beautiful of perennial plants, in form and color unlike any other. Easily grown from seed but if named varieties are desired the plants must be bought. These, which are rooted cuttings or offsets, seem to have a weaker constitution than seedlings and are more liable to the "black disease" which has lately banished delphiniums from many gardens. If this appears, root up and burn infected plants immediately and do not replant in the same spot for a year or two. Treat soil in the meantime with a good dressing of lime and sulphur.

D. hybridum is the tall upright form in various shades of blue and mauve, the more blue the better. It is the handsomest of

the delphiniums both in the garden and for cutting.

D. belladonna is a branching form with light blue flowers, that blooms most of the summer. There are various deeper and brighter blues in the branching form.

D. chinense is a dwarf species with very bright blue flowers and deeply cut foliage which is fine for massing and cutting. It is about eighteen inches tall while the others vary from three to

six feet. There is also a good white of this variety.

The taller forms bloom first in late June and should be cut back to the ground after blooming. They will send up fresh stalks and bloom again in August or September. They may be left undisturbed for three or four years and therefore should be fertilized with bone meal each spring and after each blooming. The stems are hollow, so they must be carefully staked while they are still small. Galvanized-wire rings through which they grow or brush are the easiest means. They also require winter protection of leaves or strawy manure. The taller varieties must be planted at the back of the border but chinense is fine for color toward the front.

Dicentra (Bleedingheart) D. spectabilis is the old-fashioned bleedingheart which is indispensable in the modern garden. The bright pink-and-white flowers hang along the arching stems set in deeply cut, delicate foliage. Single plants are very beautiful as features in the border or rock garden. The blooming season is late May through June. No special fertilizing is required and little winter covering. Manure should not be used. Bleedinghearts should be given a permanent place, as they will increase in size and flourish in the same spot for years.

D. formosa is a small, inconspicuous form with beautiful foliage which is an excellent shade plant. It will spread and grow in the same location for years. The flowers are a curious shade of mauvepink and last through June while the foliage is good throughout the summer, which is not true of D. spectabilis. Neither can be raised from seed. D. formosa increases rapidly from offsets but

D. spectabilis can not be divided very successfully.

Digitalis (Foxglove) Variety gloxinia flora cannot be depended upon for the small border. In certain winters it disappears completely. Planted where it will not be greatly missed if it fails to bloom, it is worth trying, as it is very beautiful in good seasons. It is easily raised from seed but should be sown very early in the spring or it will not bloom the second year. The flowering stalks four or five feet tall are very handsome and the pinkish or white flowers very pretty. Blooms in mid-June. In winter cover the ground under the tufts of leaves with straw or leaves but do not smother the plant under heavy covering. A difficult plant, which should not be featured in a small garden.

Gypsophila (Babysbreath) Must be in every garden to give delicacy and variety of form. G. paniculata is covered with tiny white flowers in July and harmonizes all the bright colors of that season with its misty white and grayish small foliage. Can be raised from seed but is very slow growing. Plants cost about \$2.50 a dozen. When once established it should never be moved. It likes an

occasional dressing of lime.

G. paniculata flore pleno is a double form with larger and whiter flowers, which comes into bloom a little later than G. paniculata.

It grows into immense white cushions which last in beauty a long time. Do not disturb but allow the plants to grow as large as they will. Stake both varieties with brush or they will break apart at the centre. The wiry gray stems will entangle themselves in the brush and the flowers completely conceal it. This variety is rather expensive, about 50 cents a plant, but it is indispensable. Very hardy and requires little winter covering.

Heuchera (Coralbells) A good edging-plant with dark green leaves

growing in rosette-like tufts.

H. gracillima rosea has delicate sprays of rose-colored flowers on wiry stems twelve or fourteen inches tall. Blooms in late June and July with a most charming and airy effect.

H. sanguinea has larger flowers of a more pronounced coral red. Is very pretty but lacks the delicacy of H. gracillima rosea.

There is a white form which is inconspicuous but very pretty for

picking and to give variety in the border.

Holluhock — An old-fashioned plant that requires no description. Hollyhocks are very easily grown from seed and since the plants are very large and should be planted at least three feet apart, few are needed in the small garden. Seeds may be started in the cold frame but a better plan is to plant them where they are to bloom. As a precaution, sow three or four close together, pull up the weaker seedlings, and allow one to remain. Hollyhocks are frequently attacked by a rust which appears as brown spots on the foliage and eventually kills it. Spraying with Bordeaux mixture as the first leaves appear above ground is the best preventive. Later pick off all infected leaves and burn them. Double hollyhocks are more showy but single ones grow taller, branch more freely, and give a better garden effect. The colors do not come true from seed but by selecting good shades and saving seed a very good strain may be established. A strain known as figleaved hybrids seems less liable to rust and is most attractive. Requires winter protection, and must be staked early with tall, stout poles.1

Iris (See Chapter VI).

Linum perenne (Flax) Another truly blue flower that is excellent in the less formal part of the garden. Easily raised from seed and will seed itself after the first year. The light green foliage is feathery and grows into a bush-like plant about eighteen inches tall with the small blue flowers dotted over it. These drop off each evening and a fresh supply opens each morning. Its blooming-period is from early June on. Fine in the rock garden. Not useful for picking or massing, but exceedingly pretty as an occasional plant.

Lupinus polyphyllus (Lupine) A beautiful blue or white flower with pretty foliage, which is excellent in some gardens and does not succeed at all in others. Easily grown from seed and requires no special care if it is inclined to grow. It is not very hardy in northern gardens and should have good winter protection. Like all hollow-

stemmed plants, it needs plenty of water and does not succeed when the summers are hot and dry. Must have well-drained soil. Muosotis (Forget-me-not) Another universally known flower. Many

varieties are listed which vary in shade and form.

M. palustris semperflorens is the old-fashioned sort which flourishes in damp and shady places and blooms most of the summer from May on.

M. alpestris (var. Heavenly Blue) is an early low-growing form with small, very bright blue flowers. It is fine for rock gardens

or planted with spring-flowering bulbs.

M. dissitiflorg is dwarf and compact and makes a good carpet for

tulips and other tall spring-blooming bulbs.

Nepeta mussini (Cat mint). A spreading gray-leaved edging plant with sprays of small mauve flowers in June. Useful and beautiful in any garden. Must be cut back after blooming and generally kept in check or it will smother the surrounding plants (see pp. 44, 74).

Papaver orientalis (Oriental poppy) A very showy plant which always tempts the new gardener but is unsuitable for a small garden because of the amount of space it takes while in bloom in June and the vacant space it leaves after blooming at a season when it is too late to fill in with anything else. Good in a remote spot where you want a splash of color. The ordinary variety is a

flaming red. Too easily grown from seed.

Mrs. Perry is a beautiful salmon-pink; Perry's White a very pretty flower. These cannot be depended upon to come true from seed. P. nudicaule; (Iceland poppy) A small brilliant poppy in shades of vellow and orange and white. Delightful in the rock garden, but is inclined to disappear without warning. Grows about twelve inches tall from a rosette of leaves. Should be sown where it is to grow and the seedlings thinned. Do not smother with too much winter covering.

Pæonia (Peony) See Chapter VI.

Phlox — A substantial perennial whose height and color vary in the

many varieties that are obtainable.

P. subulata (Moss pink) makes a pretty informal edging and is fine in the larger rock garden. Its colors are white, lavender, and bright rose. Cannot be grown from seed. Plants cost about \$2.50 a dozen and spread very rapidly.

Var. Miss Lingard (see p. 41).

Pyrethrum hybridum — A daisy-like flower in shades of rose and white. Easily grown from seed but not a particularly effective garden flower. The period of bloom is short and the plant when out of bloom, ineffective. Should be planted toward the front of the border.

Primula (Primrose). P. veris (Cowslip) is charming with late spring flowering bulbs in the rock garden, or at the edge of woods. Shades of yellow, copper, and brown. Easily grown from seed. Should

not be used in the formal border.

P. vulgaris (English primrose) A low-growing, rosette-like plant with fairly large yellow flowers. Charming in any informal planting. Foliage remains in good condition throughout the summer. There are many improved strains of the English primrose which give flowers in various colors. The Munstead Strain is one of the best. Very easily raised from seed, but a particular color or form can be increased by dividing the rosette of leaves and planting

separately the many little rooted offsets.

Sedum—S. spectabile is an absolutely dependable plant that can be used almost anywhere. Its fleshy glaucous leaves appear early and are handsome until the plant comes into bloom in the late summer, when it is covered with bright pink cushiony heads of flowers. Excellent for a rather high edging, as the habit of growth is very compact. Cannot be grown from seed, but stock can be increased rapidly by division. Can be left undisturbed for years. There are innumerable small sedums suitable for rock gardens.

Stachys lanata — Its gray, woolly foliage makes this a very valuable and beautiful edging plant. The flower is more curious than pretty, being a woolly stalk with small magenta blossoms. The season of bloom is in late June but if the flowers are cut before they go to seed the gray foliage will be fine all summer. One of the last things to be injured by frost. Like all plants with a downy surface it rots quickly under winter covering. A little ground-covering around the plant and under the leaves is all that is needed. Easily grown from seed, which can be saved from one plant. Keep a supply of plants to replace those winterkilled.

Thalictrum (Meadowrue) These are very beautiful plants that are not enough used in gardens. The flowers are charming in their season and the foliage is lovely in form and color and in good condition all summer. They should be classed among the indispensables.

T. aquilegifolium album and atropurpureum (Columbine-leaved rue) are the first to bloom in June. Their flowers are tassel-like and borne in large heads well above the cluster of foliage, on stiff stems. The first are white, the second a pinky mauve. The seedpods, which may be left on the plant until they ripen, are very handsome. Easily raised from seed.

T. adiantifolium (maidenhair-fern-leaved rue) has very beautiful foliage, finely cut and veined, and a small, brown tassel-like flower borne very freely in early July. Should be used in informal

plantings. Easily raised from seed.

T. flavum is the most conspicuous of the rues, growing very tall and having immense clusters of yellow flowers larger than the other two. The foliage is grayish and very handsome. Cannot

be grown from seed and plants are hard to get.

T. dipterocarpum is the most beautiful of all, but not hardy or dependable. The flowers are bright mauve with yellow centres and are borne in clusters. The foliage is inconspicuous. Can be raised from seed.

Trollius (Globeflower) A bright yellow ranunculus-like flower which blooms in May with the late tulips. Is excellent when once established but very slow growing. About eighteen inches tall.

T. europæus is bright yellow, T. asiaticus, a more pleasing sulphur

shade. Cannot be raised from seed and should not be moved when

once established. Plants cost about \$3.50 a dozen.

Valeriana officialis (Valerian or summer heliotrope) A sweet-scented tall white flower with large, flat heads of bloom. Blooms in June and adds grace and variety to early summer plantings. The plant is not particularly good so it should be placed where succeeding flowers will cover the place it has occupied. Will seed itself very

freely and can be started from seed.

Viola (Tufted pansy) Violas are very beautiful when they succeed but in some climates they cannot be depended upon and it is best to use pansies. They have a more spreading growth than pansies and are fine with the late spring-flowering bulbs. The type is small but many large and beautiful varieties have been developed. Can be raised from seed. The ground close to the plant and under the leaves only should be covered in winter with leaves or straw. They are most effective planted in masses of one color.

Veronica — There are a number of varieties of tall-growing veronica of various heights but they are not needed in a small garden. V. incana is a charming gray plant with gentian blue flowers, while V. rupestris is delightful as a border plant or in rock gardens.

Very bright blue flowers in June.

Annuals

Ageratum — A "periwinkle-blue" flower that makes a charming edging in its low-growing forms and is a good filler for the summer border in taller varieties. The foliage is rather coarse but the cushion-like flower and round buds growing in clusters are very pretty. Blooms from July on. Should be sown in early April in flats. Fraseri is a beautiful new variety.

Alyssum (Sweet Alyssum) A small white flower useful for edging brightly colored flower beds. Choose the most compact form the catalogue offers. May be sown in April in flats or where it is in-

tended to grow.

Antirrhinum (Snapdragon) A popular annual which requires a good deal of care. It must be sown in February and transplanted into flats or small pots to remain until it is safe to set it out in late May. There are numerous colors and varieties, ranging from white to deep red and to yellow and orange and from six inches to two feet in height. The tall is good in the border, the low-growing forms make a good mass of color in beds or at the front of the border. It is subject to a rust which spots the leaves brown. If this appears, do not try to grow antirrhinums in your garden for a year or two. The tall varieties require careful staking. The blooming season is a long one.

Aster — The choice of varieties of a flower with so many forms is largely a matter of personal taste but since the blooming season of the aster is short and it is most useful as a cut flower, it is not especially recommended for a small garden. It is best sown where it is

intended to flower, not earlier than May.

Calendula (Pot Marigold) A very pretty yellow flower with a pleasant pungent odor. It is very hardy and can be sown early where it is expected to grow. It will seed itself if some of the flowers are allowed to ripen seed, but unless most of them are picked it will soon bloom itself out.

Cineraria maritima (Dusty miller) A gray-leaved plant which is really a perennial but in Northern climates must be treated as an annual. Has no flower, but its gray cut foliage makes a beautiful edging. Must be seeded very early and transplanted into flats or pots before

it is set out.

Centaurea cyanus (Cornflower) Unnecessary to describe. Blue is its popular color but there are also a beautiful pink and a white. It is better to buy seed of the double-flowering type and to sow where it is intended to bloom in late April or early May. It will be necessary to thin the seedlings if large flowers are to be obtained. Can

be depended upon to seed itself after the first year.

Cosmos — One of the best late-flowering annuals, yet in all but Southern climates an early-flowering strain should be chosen or it will not flower before frost. Its colors are white, pink, and red. For a small garden very few plants are needed as they must be planted at least two feet apart. Sow in April, transplant into pots, and set out in late May. Pinch back the tops to induce branching growth. Cosmos requires very heavy stakes, which should be placed while the plants are small, and the plant should be tied loosely as it grows. Good for the back of a border.

Heliotrope — Can be grown from seed but it is better for the small

gardener to buy the plants required.

Centefleur is a good variety, with immense heads of dark purple

flowers.

Annual Larkspur — One of the very best annuals. Double-stock-flowered is the showiest variety. It is very pretty in the garden and excellent for cutting. Can be sown where it is to grow or may be had a little earlier by starting the seed in flats. The seedlings come thickly and must be thinned ruthlessly. The colors are pink, white, blue, and purple. Recently a bright coral pink has been introduced, which is offered in different catalogues under various

names

Marigold — African marigolds are one of the handsomest and most useful annuals. The best variety is Lemon Queen, a beautiful pale yellow whose flowers are not too compact. Seed about the middle of April and transplant into pots. About a dozen plants are all the small garden will need, as they are spreading and tall and should be planted about two feet apart. Require careful staking with strong stakes. Dwarf-double French marigolds are a pretty edging plant. Lemon Ball is the same color as Lemon Queen. Legion of Honor is a very pretty single flower with finely cut foliage, growing about nine inches tall. Marigolds can be had in various shades of yellow and many of the French marigolds have bronze markings.

Nigella — (Love-in-a-mist) One of the few really blue annuals, a curious flower enclosed in a green web. Very easily grown from seed sown in the open ground in late April or early May. Not particularly effective in planting schemes, but good for cutting and pretty for informal plans. The best variety is Miss Jekyll.

Nasturtium — Pretty for some places but ineffective as a plant, and not worth the space they require unless they happen to be your favorite

Pansy — A most useful and engaging bedding-plant which should be treated as a biennial — that is, seeded in August, set out in September where it is to bloom, given protection under and around the foliage. Will bloom from early spring through the summer if the seed-pods are carefully cut. Innumerable varieties, but a good mixture is best for the small garden, or a packet each of bright blue,

yellow, and white.

Petunia — The most useful of all annual bedding-plants. Blooms all summer giving a mass of color. The seeds are very tiny and must be thinly sown on top of the soil in late February. Best sown in a bulb pan, covered with a sheet of glass, and set in a sunny window. Transplant into a flat as soon as they can be handled. Rosy Morn is a fine pink bedding-variety. There are several good white varieties and a deep purple, which is larger than the ordinary bedding varieties, is variously called Balcony Queen, Purple Prince, Superb Violet, and so on.

Large fringed types are now being developed which are very handsome, but the small bedding sorts are better for the little garden. Double forms are not recommended when space is limited. Very special care should be taken in ordering petunia seed to get the best

strain obtainable. Avoid mixed colors.

Phlox drummondi — A beautiful small edging-plant whose best colors are white, salmon pink, and soft yellow. Seeds do not germinate readily, so a good supply should be sown. Seed early - about the middle of February — in flats and transplant into other flats as soon as they can be handled. In setting out they must be planted close together to give the best effect. They have a delicacy which makes them harmonize with almost anything. Buy in separate colors.

Poppy - The best small variety is the Shirley poppy. Buy mixed seed and sow in the open ground as thinly as possible. A good plan is to sow in the late fall allowing the seeds to lie dormant through the winter. Not suitable for formal plantings, but very pretty used in any other way. A good cut flower if the stems are put in very hot water immediately after cutting.

A tall double strain is handsome and the mauve opium-poppy is effective. No poppies can be successfully transplanted, but must

be sown where they are to bloom.

Portulaca — Very pretty for edging and ground cover in an informal planting. Sow where it is to bloom. It will seed itself forever after. Beautiful pinks and yellows have been developed lately. Buy in separate colors, if possible. The single form is the prettiest.

Scabiosa (Mourning Bride) An annual to be planted for a change but not as a stand-by. Good for picking but not effective in the garden. Seed about the first of April in flats, and set out in May, giving plenty of room for each plant. Buy seeds in separate colors.

Sweet pea — Not a good flower for the small garden. Can be grown in the vegetable garden for cutting, but requires much care and must be picked every day if the bloom is to persist. Buy the Spencer type and select colors from any good catalogue. In England sweet peas are grown as a border plant, being trained over bamboo poles set in a small circle and tied together at the top. With care this can be successfully done in America. For early bloom, plant two or three seeds in a small pot, pulling up all but one when they have germinated, or sow in the open ground in early May. Must have brush or wire, which should be put in place early, to grow over.

Stocks — Not recommended for the small garden. Must be sown very early in flats, transplanted into pots, and set out toward the end of May. The Cut-and-come-again is the best garden strain. Buy

seed in separate colors.

Zinnia — One of the very best annuals that will thrive anywhere. Splendid for garden effect if well grown in separate colors. Can be sown in the open ground or started in April in flats, transplanted when large enough to handle, and planted out toward the end of May. Tall double zinnias are very fine in groups in the border, and the dwarf types are excellent for color effect toward the front of the border or in beds. Plant large varieties eighteen inches to two feet apart, dwarf about nine inches apart. Select colors very carefully, getting a pale yellow, a bright yellow, a white, a flesh-color, and a salmon-rose. There will be many variations of shade. Dwarf salmon-pink is particularly pretty. The tall varieties should be staked.

Native Plants Suitable for the Garden or Naturalizing

Aquilegia canadensis (Columbine) The small yellow and red columbine which grows in almost every part of America. Easily grown from seed and increases very rapidly. Gather or buy seed and sow in drills in the cold frame or seed bed. Set out in woodland or border in early fall. Is now protected in some states, so do not collect or buy plants but grow from seed.

A. carulea (Rocky Mountain columbine) is also fairly easy to

naturalize.

Anemone pennsylvanica — A beautiful small white flower with a yellow centre. From a few plants a good colony may soon be established. Blooms in May and June and is one of the very prettiest of the native plants. Cannot be grown from seed. Suitable for woodland or any informal planting. Pretty cut foliage that is good all summer.

Asclepias tuberosa (Butterflyweed) One of the most brilliant of the native plants. Flat heads of flaming orange flowers in August. Prefers sun and dry places. Easily raised from seed and easily

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established. Shoots appear above ground very late in the spring so it should be marked if planted in the shrub borders. Sow in seed bed and set out in the early fall. A truly beautiful plant that

is not enough used in gardens.

Aster nova anglia (New England aster) The ordinary roadside aster, which increases in size and brilliancy of color when taken into the garden. Dig a few good clumps and divide them. They will increase rapidly. The ordinary color is bright purple with a conspicuous yellow centre but occasionally a bright pink appears. There are quantities of small native asters that can be used in wild gardens.

Cimicifuga racemosa — A very handsome plant with a pointed spike of small white flowers, on a wiry stem about two feet tall. The foliage is fine and the plant could be suitably used in any border. Can be bought as a plant from nurseries but seeds cannot be purchased. Blooms in late August and should be used in more gardens. Possesses the elegance demanded in a good border-plant.

Dodecatheon media (Shootingstar) A beautiful native plant that is not easy to establish where it does not naturally grow. Likes sun and grows in quantity when finally persuaded to grow. Transplant from meadows, replanting immediately, or gather seed which it

sets in quantities and try your luck.

Geranium (Cranesbill) A few clumps can be collected and they will increase rapidly. The foliage is particularly fine and the flowers pretty but not conspicuous. Not suitable for the border but good in woodland or large rockery. Prefers shade and some moisture.

Hepatica triloba — Almost the earliest flower to bloom and one of the most charming. The mauve, pink, or white flowers with yellow centres appear in April and the foliage follows. The leaves persist through the summer and make this an excellent plant for bare

places under trees.

Lilium superbum (Turk's cap lily) Grows in open fields in many parts of America. Very hard to collect because the bulbs are so deep in the ground. Buy from a reliable nursery and put in a sunny, open place. Blooms in late June and July for a short period so is

not suitable in the border but is fine at the edge of trees.

Mertensia virginica (Virginia cowslip) The most beautiful of blue flowers, whose buds are bright pink. Not suitable for the flower garden but delightful among daffodils or in shrubbery borders. Blooms in early May on long pale-green arching stems set with gray-green leaves. Seeds itself and increases very rapidly. Should be bought from some reliable nursery and be allowed to establish itself. A native plant that should grow in every garden.

Phlox divaricata — The blue native phlox that is suitably used with the spring-flowering bulbs in the border, shrub-beds, or woodland.

^{1&}quot;Reliable" throughout this list means a nursery where collecting and propagating are carefully done with a view to conservation of both plants and landscape.

Blooms through May and early June. Can be collected sparingly or bought in small quantities from a nursery. Will easily become established and increase rapidly. Beautiful with Narcissus poeticus

or cottage tulips.

Polygonatum giganteum (Solomonseal) A white bell-like flower hanging from long arching stems. A good border-plant and fine in the rock garden. Blooms in June. Can be bought (three or four are enough) from a nursery and will increase very rapidly in good garden-soil. giving a supply of plants for transplanting.

Sanguinaria canadensis (Bloodroot) A most charming wax-white flower with large round leaves which appear after the flower. Is protected in some states, so buy only from reliable nurseries. Increases

rapidly in suitable position under trees.

Thalictrum polygamum (Tall meadowrue) A fine green foliage-plant with inconspicuous but pretty white flowers. Can be used in the border for good green foundation. Prefers sun but will grow in shade. In garden soil will grow to four feet. Can be collected in large clumps and divided.

Tradescantia virginica (Spiderwort) A fine blue flower which can be used in the border but is better in informal plantings. Blooms in late June in sun but likes moisture. Will increase in size of bloom and height in good soil. Not so easy to use well as some of the other native plants.

Trillium grandiflorum — Rapidly dving out because it is picked in such quantities by excursionists. In picking, the stem is drawn out of the bulb and the bulb dies. Should always be cut above ground. A fine white three-petaled flower, turning pink as it ripens. Not suitable in borders but fine under trees in wild gardens.

Uvularia perfoliata (Bellwort) A delightful yellow flower hanging like a bell from a wiry green stem. The petals are twisted and the flowers grow in clusters of two or three. Will increase very rapidly when once established. Blooms in late May and early June.

Violet — Suitable for little colonies in woodland but not good in the garden. Prettiest where it grows and hardly worth transplanting

for effect.

Spring-Flowering Bulbs

Spring-flowering bulbs should be planted in October. A good rule is to set them three times their diameter below the surface of the ground. Use a trowel, not a dibble. They will become established and increase rapidly if part of their foliage is allowed to ripen before it is cut off; it is ripe when it turns brown. With tulips only the large leaf at the base need be left.

SMALL BULBS FOR NATURALIZING OR PLANTING AT THE EDGE OF SHRUBBERY

(Do not plant in flowerbeds. All are inexpensive.)

Scilla sibirica - Small, bright blue, bell-shaped flowers. Almost the first to bloom.

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Crocus — Very early. Safely bought in mixed colors. See page 31. Chionodoxa — Early blue flower. C. luciliæ has a white eye. C. sardensis is gentian blue. C. gigantea is star-shaped, larger, and later than the other varieties.

Galanthus nivalis — The common snowdrop, the first flower to appear.

Muscari (Grape hyacinth) The best variety is Heavenly Blue, a name which exactly describes it. This is later than others in this list but indispensable for its color and form. Beautiful with tulips or primroses and in the rock garden.

The best larger bulbs for naturalizing are narcissi. Throw a handful on the ground and plant them where they fall. Those in the following list are inexpensive but beautiful varieties. They should be planted in the autumn of 1925, as after that date they fall under the ban of Quarantine 37 (see page 31). Economize on something else and buy them before it is too late.

Large Trumpet Narcissus (Daffodils).

Emperor - Fine primrose yellow, large and fairly early. About

\$6.00 a hundred.1

Empress — Like Emperor but with a white trumpet and yellow perianth (the frill which surrounds the trumpet). About the same price.

Golden Spur — Smaller than the above and bright yellow. Early.

Same price as above.

Mme. de Graff — A fine, inexpensive white.

Cup Narcissus (Daffodils with a cup-like centre instead of a trumpet).

Barri conspicuus — Primrose with an orange cup. About \$5.00 a hundred.

Mrs. Langtry — A very fine tall white. Less than \$5.00 a hundred. Narcissus poeticus, the poets' narcissus — White, with a yellow-andorange eye. Late. Ornatus is a newer and larger form. Both are inexpensive: about \$4.00 a hundred.

MAY-FLOWERING TULIPS

(Darwins, Cottage, and Breeder)

These should be planted in every garden. They bloom with lilacs, thorns, and crabs, and are the gayest and handsomest spring flowers. Darwins have no yellow or orange shades, but Cottage tulips make up this deficiency. Breeders are bronze, purple, and coppery tones. All are twenty-four to thirty-six inches tall. They may be planted at the edge of shrubbery or under flowering trees, but they are not suitable for naturalizing. They are fine in the garden beds and borders, planted among the summer-flowering perennials whose growth will conceal their fading leaves.

¹ These prices are in all cases approximate.

Darwin Tulips.

Clara Butt — Bright pink, per hundred, \$4.00.1

Margaret — Pale pink, \$3.00.

Europe — Sealing-wax red, \$5.00.

Mr. Farncombe Sanders — Bright red, \$6.00. Dream — Mauve with blue centre, \$4.00.

Valentine — Pinky purple, very large flower, \$6.00.

Zulu — Purple-black, very tall, \$4.00.

Faust — Dark maroon, \$6.00.

La Candeur — Cream-white, \$5.00.

Cottage Tulips.

Avis Kennicott — Bright yellow, reflexed petals, \$6.00.

Ellen Willmott — Pale yellow, reflexed petals; one of the most beau-

tiful, \$5.00.

Moonlight — Lemon yellow, very large and tall, \$5.00. Fairy Queen — Yellow petals with heliotrope edges, \$5.00.

John Ruskin — Orange-yellow and pink, \$5.00.

La Merveille — Flame-color; a beautiful pointed flower. Like John Ruskin, its stem is slender and curved. \$5.00.

Orange King — Bright orange, \$5.00. Inglescombe Pink — Salmon, \$5.00.

Picotee — White with a pink edge; reflexed petals, \$5.00.

The Fawn — Soft tan-color, \$5.00.

Breeder Tulips.

Cardinal Manning — Rosy mauve, very tall and fine; late, \$5.00.

Jaune d' Oeuf — Orange-yellow with violet shading, \$6.00. Panorama or Fairy — Burnt orange; very large flower, \$6.00.

Two beautiful Cottage tulips that are more expensive are Mrs. Kerrell (yellowish rose) and Salmonea (yellow-salmon).

Summer-Flowering Bulbs

Summer-flowering bulbs are indispensable as fillers. They give bloom and color at a time when other flowers are scarce.

Gladioli (annual).

Europe — White. Peace — White.

Schwaben — Yellow.

Niagara — Yellow.

America — Pale pink.

Mrs. Frank Pendleton — Deeper pink.

Chicago Salmon — Salmon pink.

Mrs. Francis King — Flame-color.

Halley — Red.

These vary in price at different nurseries, but all are cheap.

¹ These prices are in all cases approximate.

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The prettiest of all gladioli are *Primulinus* hybrids, which come in shades of yellow and orange. The flowers are smaller and set farther apart on the stem than the other type, and the stems are more slender and graceful. If you have room for only a few gladioli, choose these and buy a good mixture. All their colors are good and harmonize.

- Hyacinthus candicans (Galtonia) Small bell-shaped white flowers, growing on a stout upright stem from a tuft of green leaves. Ornamental, and can be brought into bloom for the late summer. If once you use them, they will be in the garden every year. Annual.
- Lilium candidum (Madonna lily) A beautiful early white lily that is fine with the tall perennials of early summer. Must be planted in August, so that the bulbs will have time to set a rosette of leaves before frost. Not entirely dependable, and not very cheap. Perennial.
- Lilium speciosum Expensive, but a few add great charm to the latesummer garden. S. rubrum magnificum is the best variety; it is white suffused with pink, with red dots. Plant deep, where it will be somewhat shaded. Perennial.
- Lilium tigrinum The old-fashioned tiger lily. Beautiful at the back of the border, where it becomes established and increases.
- Lilium umbellatum Orange-colored, blooming in an umbel at the tip of a leaf-covered stalk. Earlier than the other lilies, blooming in June. Perennial.
- Single Tuberose A charming little flower like a miniature lily, which just fits in the little garden. The odor, which is so strong in the house, is delicious in the garden. Annual.

PLANTING-COMBINATIONS AND COLOR SCHEMES

The knack or art or craft of combining plants for color, texture, and quality is difficult. Experience, even, does not make it easy, because of varying climatic conditions and the contrariness of the flowers themselves. There follow a few elementary suggestions for simple combinations, in which these various attributes are taken into consideration. They are nothing more than a point of departure for the very new garden, and will answer until definite likes and dislikes are established and until you learn how many beautiful ideas cannot be carried out.

In spring gardens almost anything may happen and, on the other hand, almost anything may fail to happen. Late cold weather will bring everything into bloom in a burst of astonishing beauty instead of the gradual crescendo beginning in early April and lasting through May. By peony-time the season is more established, and plans for June or early July usually work out well, while summer and autumn — unless an unusually hot, unusually cold, unusually dry, or unusually wet period interferes — are more stereotyped in their procedure. With this warning these plans and suggestions are submitted: —

Darwin tulip Clara Butt, narcissus Mrs. Langtry, and grape hyacinths.

Iris florentina, bleedingheart, and forget-me-nots Royal Blue. Solomonseal (Polygonatum gigantea), Anchusa myosotidiflora, and Primula (Munstead strain.)

Iris Blue King, cottage tulip Miss Willmott, and Nepeta mussini.

Irises with columbines and hardy pinks.

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Single peonies, pink and white, with Iris Pallida dalmatica.

Flax, columbines, and Dianthus deltoides (maiden pink).

Sweet-william Newport Pink, Anchusa italica, and valerian.

Thalictrum aquilegifolium purpureum, Clematis recta, and Sweet-william Newport pink.

Hermosa roses and Stachys lanata.

Gypsophila paniculata flore pleno, Delphinium chinensis, and pink, yellow, or white Phlox drummondi for edging.

White phlox, pink gladioli, and *Hyacinthus candicans*. Yellow gladioli can also be used.

Salmon-pink dwarf zinnias, any low-growing ageratum, and white *Phlox drummondi*.

Heliotrope, flesh-colored zinnias, and pink *Phlox drummondi*. Japanese anemones, pink or white, with *Buddleia veitchiana*.

African marigold Lemon Queen, white zinnias, tall ageratum, Cineraria maritima.

Mertensia virginica, Trillium grandiflorum, and cottage tulip Avis Kennicott.

Heuchera gracillima rosea, Dianthus Mrs. Sinkins, and blue Campanula persicifolia.

Tulips Clara Butt, Margaret, Europe, and a few Faust for accent.

Tulips Dream, La Candeur, and Zulu have distinction either in closely associated groups or mixed together.

Tulips Orange King, Ellen Willmott, Avis Kennicott, with a group of trollius in the foreground.

For a long border of tulips with a transition from one end to the other, begin with bright yellows, working through the pale yellows to Panorama (or Fairy), Jaune d'Oeuf, John Ruskin, The Fawn, Mrs. Kerrell, Inglescombe Pink, the paler to the brighter pink Darwins, ending with Valentine, Dream, and La Candeur. Florentine iris and iris Purple King are the only two that can be counted upon to bloom with the tulips. The first is beautiful with Clara Butt and grape hyacinths.

Lilium umbellatum will sometimes bloom with Thalictrum flavus and it is worth while planting them together in that hope.

Plant tulip La Merveille and *Narcissus poeticus* near an early-flowering thorn, and Dream in front of Persian lilacs.

Delphiniums are best in masses. They harmonize with any flower which may grow near them.

Bright blues are always successful with salmon pinks or lemon yellows. Gray foliage sets off these combinations.

Roses are too formal a flower to be associated with coarseleaved annuals.

Do not use in a small garden flowers whose period of bloom is very short, unless the plant upon which they bloom has beauty of form and persistent foliage. Iris is an example of such a flower that should be used, the Oriental poppy of one that should not be used in the little garden.

Associate gladioli with *Gypsophila paniculata*, the foliage of *Thalictrum*, or a gray-leaved plant such as *Cineraria maritima* or *Stachys lanata*. Single white petunias which grow rampantly are also good with stiff-stemmed spiky plants.

Plant speciosum lilies among peonies. Their early growth will be shaded and the peony foliage will set them off.

Associate Nepeta mussini, Cerastium tomentosum, and hardy pinks as edgings with early summer perennials.

Use plants with good foliage — such as *Thalictrum*, peonies, Japanese anemones — near plants with little, poor, or coarse foliage.

Always consider the foliage-value of plants as well as color and form. Good green is more important than occasional bursts of bloom, and assures a beautiful summer garden.

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Use gray-leaved plants in combination with bright-colored flowers and vivid greens.

Give much attention to edging plants. They give finish and design to a garden.

In planning a border do not use too many varieties of plants. For example, repeated groups of the following varieties will give bloom throughout the season: Iris, columbine, delphinium, Gypsophila paniculata flore pleno, phlox, New England asters. Plant May-flowering tulips among gypsophila and phlox for early bloom. Edge with Cerastium tomentosum, Nepeta mussini, and hardy pinks. Plan one unit of this border and repeat for the entire length. Other plants may be employed. This series is given as typical.



EPILOGUE

TAKE the rim of as much of the world as you can see and use it for the bowl in which you make your garden. Sky line, hills, lowlands, trees near and far, roofs of houses, are the bowl. In its centre is — your garden.

Make an island of color that glows and vibrates and dashes up against the sides of your bowl, threatening to overleap its barrier and escape into the sky with the butterflies.

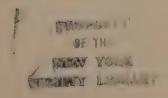
Make in the midst of the color a still place that reflects all things — sky, trees, and glow — but hides its own secret: a dark, cool plash of water that can be heard in the night.

Give each flower a place most becoming to its beauty, and consider its tastes when you choose its companions. So that you, for whose pleasure they grow, may enjoy the flowers, make paths through the glowing groups; and to learn the art of paths, study the Persian rugs patient artists have made in the Far East centuries before you were born.

Every day walk around the rim of your island of color. It must be beautiful looking in as well as looking out.

If it fills your bowl, it will fill no other.

SARAH LOWRIE in the "Bulletin of the Garden Club of America"







Printed by McGrath-Sherrill Press, Boston Bound by Boston Bookbinding Co., Cambridge







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